

# **COSMETIC AND TOILETRY FORMULATIONS**

**Second Edition**

**Volume 3**

by

**Ernest W. Flick**



**NOYES PUBLICATIONS**  
Park Ridge, New Jersey, U.S.A.

Copyright © 1995 by Ernest W. Flick

No part of this book may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, recording or by any information storage and retrieval system, without permission in writing from the Publisher.

Library of Congress Catalog Card Number 89-39099

ISBN 0-8155-1367

Printed in the United States

Published in the United States of America by

Noyes Publications

Mill Road, Park Ridge, New Jersey 07656

Library of Congress Cataloging-in-Publication Data  
(Revised for vol. 3)

Flick, Ernest W.

Cosmetic and toiletry formulations.

1. Cosmetics. 2. Toilet preparations.

I. Title.

TP983.F55 1989 668'.55 89-39099

ISBN 0-8155-1218-X (v. 1)

ISBN 0-8155-1306-2 (v. 2)

ISBN 0-8155-1367-4 (v. 3)

# **COSMETIC AND TOILETRY FORMULATIONS**

## **Second Edition — Volume 2**

by

**Ernest W. Flick**

More than 1900 cosmetic and toiletry formulations are detailed in this volume, based on information received from numerous industrial companies and other organizations. This is Volume 2 of the Second Edition of this popular work, Volume 1 having been published in 1989. No formulations have been repeated.

The data represent selections from manufacturers' descriptions made at no cost to, nor influence from, the makers or distributors of these materials. Only the most recent formulas have been included. It is believed that all of the trademarked raw materials listed are currently available, which will be of interest to readers concerned with raw material discontinuances.

The 1989 market for cosmetic and toiletry raw materials was \$1.6 billion. That market is projected to increase to about \$1.8 billion by 1994, thus making the information in the book particularly interesting to anyone considering

new products or process variations.

Each formulation in the book is identified by a description of end use. The formulations include the following as available, in the manufacturer's own words: a listing of each raw material contained; the percent by weight of each raw material; suggested formulation procedure; and the formula source, which is the company or organization that supplied the formula.

The formulations in the book are divided into fifteen categories as shown below. In addition, a valuable section on **Trade-Named Raw Materials** is included, which lists trade-names, a brief chemical description, and the supplier's name. The final section contains **Suppliers' Addresses** and will no doubt be a useful tool to the reader.

**Section titles** are listed below. Parenthetic numbers indicate the number of formulations per topic.

1. **Antiperspirants and Deodorants (53)**
2. **Baby Products (52)**
3. **Bath and Shower Products (136)**
4. **Beauty Aids (205)**
5. **Creams (315)**
6. **Fragrances and Perfumes (7)**
7. **Hair Care Products (302)**
8. **Lipsticks (45)**
9. **Lotions (164)**
10. **Shampoos (341)**
11. **Shaving Products (39)**
12. **Soaps (35)**
13. **Sun Care Products (160)**
14. **Toothpastes (32)**
15. **Miscellaneous (83)**
16. **Trade-Named and Other  
Raw Materials Descriptions**
17. **Suppliers' Addresses**

# **COSMETIC AND TOILETRY FORMULATIONS**

## **Second Edition — Volume 1**

by

**Ernest W. Flick**

More than 1800 cosmetic and toiletry formulations are described in the Second Edition of this well-received and useful book. The book is based on information obtained from industrial companies and other organizations. The data represent selections from manufacturers' descriptions, in their own words, made at no cost to, nor influence from, the makers or distributors of these materials.

Only the most recent formulas have been included. It is believed that all of the trade-named raw materials listed are currently available, which will be of utmost interest to readers concerned with raw material discontinuances.

Spurred by a strong economy, cosmetic and toiletry sales, a multibillion dollar market, have been increasing at 6 to 7% annually, thus making the information in the book particularly interesting to anyone considering new products

or process variations.

Each formulation in the book is categorized by a description of its end use. The formulations include the following: a list of each suggested raw material; the percent by weight of each raw material; a recommended formulation procedure; and the formula source, which is the company or organization that supplied the formula.

The formulations in the book are divided into fourteen categories as shown below. In addition a valuable section on **Trade-Named Raw Materials** is included, which lists trade-names, a brief chemical description, and the supplier's name. The final section contains **Suppliers' Addresses** and will no doubt be a useful tool to the reader.

**Section titles** are listed below. Parenthetic numbers indicate the number of formulations per topic.

1. **Antiperspirants and Deodorants (44)**
2. **Baby Products (64)**
3. **Bath and Shower Products (138)**
4. **Beauty Aids (189)**
5. **Creams (230)**
6. **Fragrances and Perfumes (12)**
7. **Hair Care Products (381)**
8. **Insect Repellents (11)**
9. **Lotions (157)**
10. **Shampoos (206)**
11. **Shaving Products (52)**
12. **Soaps (91)**
13. **Sun Care Products (180)**
14. **Miscellaneous (82)**
15. **Trade-Named Raw Materials**
16. **Suppliers' Addresses**



# Contents and Subject Index

<b>SECTION I: ANTIPERSPIRANTS AND DEODORANTS</b>	<b>1</b>
Antiperspirant Lotion	2
Roll-On Antiperspirant	2
Antiperspirant Stick	3
Antiperspirant Gel	3
Clear Roll-On Antiperspirant	4
Antiperspirant Lotion	4
Deodorant Cologne	5
Deodorant Spray (Pump Dispensing)	5
Deodorant Stick Without Alcohol	6
Antiperspirant Cream	6
Antiperspirant Gel	6
Deodorant Stick	7
Deodorant Cream	7
Deodorant Stick	8
Glycerin-Based Deodorant Gel	8
Liquid Antiperspirant Emulsion	9
Stick Deodorant	9
Dry Roll-On Antiperspirant(s)	10
Nonwhitening Antiperspirant Solid(s)	11
Antiperspirant Solid	12
"Roll-On" Deodorant Antiperspirant	13
Deodorant Antiperspirant Stick	13
Solid Stick Antiperspirant(s)	14
<b>SECTION II: BABY PRODUCTS</b>	<b>15</b>
Baby Bath(s)	16
Baby Lotion(s)	17
Baby Lotion Mousse with Panthenol, Vitamin E and Sunscreens	18
Baby Skin Lotion	19
Baby Cream	19
Baby Oil(s)	20
Baby Shampoo	21

Protein Baby Shampoo . . . . .	21
Baby Shampoo—Regular . . . . .	22
Baby Shampoo—Soft Conditioning . . . . .	22
Baby Shampoo . . . . .	23
Diaper Cream (W/O Emulsion) . . . . .	23
Baby Skin Treatment Ointment . . . . .	24
Pearlized Baby Wash Emulsion . . . . .	24
Mild Baby Shampoo . . . . .	25
Low Cost Baby Shampoo . . . . .	25
Skin Cream(s) for Babies . . . . .	26
<b>SECTION III: BATH AND SHOWER PRODUCTS . . . . .</b>	<b>28</b>
After Bath Freshener . . . . .	29
After Bath Splash . . . . .	29
Bath Gel(s) . . . . .	30
Mild Bubble Bath . . . . .	32
Blooming Bath Oil(s) . . . . .	32
Floating Bath Oil . . . . .	34
Blooming Emollient Bath Oil . . . . .	35
Low Foaming Bath Oil . . . . .	35
Blooming Bath Oil with Shebu . . . . .	36
Blooming Bath Oil(s) . . . . .	36
Mild Bath Foam . . . . .	37
Body Shampoo(s) . . . . .	38
Refreshing Body Splash . . . . .	39
Bubble Bath Powder(s) . . . . .	40
Deodorant Foaming Bath Oil . . . . .	41
Foam Bath . . . . .	41
Emollient Foaming Bath Gel . . . . .	42
European Style Bath Gel . . . . .	42
Enriched Bath/Shower Gel . . . . .	43
High Foaming Shower Gel . . . . .	43
Liquid Bubble Bath . . . . .	44
Bubble Bath . . . . .	44
Liquid Bubble Bath . . . . .	45
Shower Gel with Emollient . . . . .	45
Moisturizing Bath Foam . . . . .	46
Floating Bath Oil . . . . .	46
Pearlized Head to Toe Cleanser . . . . .	47
After-Bath Splash . . . . .	47
Premium Bubble Bath . . . . .	48
Silky Bubble Bath . . . . .	48
Shower Bath(s) . . . . .	49
Shower Gel(s) . . . . .	51

Shower Soap . . . . .	52
Silky Bubble Bath . . . . .	53
Bubble Bath . . . . .	53
Low Cost Bubble Bath . . . . .	53
Skin Conditioner Bath Gelee(s) . . . . .	54
Skin Softening Bath Oil . . . . .	55
Soothing Bath Oil . . . . .	55
Skin Treatment Bath Oil . . . . .	56
Spreading Bath Oil with Vitamin E . . . . .	56

<b>SECTION IV: BEAUTY AIDS . . . . .</b>	<b>57</b>
Active Cleanser . . . . .	58
Cleanser . . . . .	58
Alcoholic Splash Toner . . . . .	59
Non-Alcoholic Splash Toner . . . . .	59
Aqua Gel . . . . .	60
Velvety Dusting Powder . . . . .	60
Body Powder Mousse with Panthenol and Vitamin E . . . . .	61
Nail Conditioner with Panthenol . . . . .	61
Concealer . . . . .	62
Face Bronzer Pressed Powder . . . . .	62
Conditioning Skin Mousse . . . . .	63
Penetrating Moisturizer (Pump) . . . . .	63
Crayon Eyeshadow . . . . .	64
Emulsion Cream Eyeshadow . . . . .	64
Cream Eye Shadow(s) . . . . .	65
Velvety Pressed Powder Eyeshadow . . . . .	66
Cream Make-Up . . . . .	67
Creamy Blusher . . . . .	68
Creamy Pearl Blush . . . . .	69
Shimmering Pearl Pressed Powder Blush . . . . .	69
Cutical Conditioner(s) . . . . .	70
Dark Beige Liquid Makeup . . . . .	71
Dual Face Powder . . . . .	72
Silky Face Powder . . . . .	72
Emulsion Cream Mascara . . . . .	73
Waterproof Mascara . . . . .	73
Facial Cleanser . . . . .	74
Face Gel with Sulfur . . . . .	74
Facial Cleanser . . . . .	75
Nail Strengthening Composition . . . . .	75
Facial Cleanser . . . . .	76
Temporary Wrinkle Remover . . . . .	76
Foot Cooling Gel(s) . . . . .	77

Gel-Blush Frost . . . . .	78
Blush Stick . . . . .	78
Gentle Beauty Wash . . . . .	79
Moisturizing Gel . . . . .	79
Glossy Lipstick . . . . .	80
Soft Lipstick . . . . .	80
Ice Gel . . . . .	81
Liposome Gel . . . . .	81
Lip Balm(s) . . . . .	82
Creamy Lipstick Base . . . . .	82
Lip Glaze . . . . .	83
Medium Lipstick . . . . .	83
Lip Gloss . . . . .	84
Lip Balm with Shebu . . . . .	84
Lip Pot(s) . . . . .	85
Lipsome Eye Treatment . . . . .	86
Detergent Cleansing Gel . . . . .	86
Lipstick . . . . .	87
Lipstick "Elance" with Sunscreen . . . . .	88
Firm Lipstick . . . . .	88
Liquid Eye Liner(s) . . . . .	89
Sheer Satin Pressed Powder Eyeshadow . . . . .	90
Liquid Frosted Blusher . . . . .	91
Liquid Make-Up . . . . .	92
Earthtone Make-Up Powder . . . . .	93
Long Wearing Creamy Lipstick . . . . .	94
Lipstick Base . . . . .	94
Long Wearing Pressed Eyeshadow . . . . .	95
Gel Eye Makeup Remover . . . . .	95
Low Alcohol Moisturizing Lotion . . . . .	96
Shave Gel . . . . .	96
Make-Up Base . . . . .	97
Glitter Gel . . . . .	97
"Matte-Finished" Make-Up . . . . .	98
Deep-Penetrating, Conditioning Mascara . . . . .	98
Moisturizer . . . . .	99
Moisturizing Gel . . . . .	99
Moisturizer with Sun Screen . . . . .	100
Multi-Protective Skin Moisturizer (Cationic) . . . . .	101
Conditioning Facial Cleanser . . . . .	101
Natural Cleanser . . . . .	102
Water-in-Oil Emulsion Base . . . . .	102
Nongreasy Body Oil . . . . .	103
Emollient Body Oil . . . . .	103

Perfume Gel . . . . .	104
Placenta Gel . . . . .	104
Poured Eyeshadow . . . . .	105
Frosted Pressed Powder Eyeshadow . . . . .	105
Pressed Lip Powder . . . . .	106
Lip Gloss with Sunscreen . . . . .	106
Shebu Lip Moisturizer . . . . .	107
Moisturizing Lip Pot . . . . .	107
Sheer Leg Make-Up . . . . .	108
Sparkling Ruby Nail Enamel . . . . .	108
Silky Pressed Powder Eyeshadow . . . . .	109
"Touch of Velvet" Eye Shadow . . . . .	109
Skin Conditioning Mousse . . . . .	110
Make-Up Remover . . . . .	110
Skin Guardian . . . . .	111
Skin Mousse with Shebu for Dry Skin . . . . .	112
Skin Smoother and Moisturizer with Shea Butter and Collagen . . . . .	112
Skin Toner . . . . .	113
Toner . . . . .	113
"Slender" Stick Eyeshadow . . . . .	114
Loose Powder Eyeshadow . . . . .	114
Sprayable Moisturizer . . . . .	115
Moisturizing Gelee with Pseudocollagen . . . . .	115
Temporary Wrinkle Remover(s) . . . . .	116
Cuticle Remover . . . . .	117
Vitamin A Eye Gel . . . . .	118
Cuticle Coating . . . . .	118
Water Resistant Mascara . . . . .	119
W/O Liquid Makeup . . . . .	120
W/O Liquid Makeup (Cold Mix Formula) . . . . .	120
W/O Liquid Makeup—Oil Free . . . . .	121
Liquid Hand and Facial Cleanser . . . . .	121
<b>SECTION V: CREAMS . . . . .</b>	<b>122</b>
All Purpose Cream . . . . .	123
Foundation Cream . . . . .	123
All-Purpose Dry Skin Cream . . . . .	124
Therapeutic Humectant Creme . . . . .	124
All Purpose Moisturizing Cream . . . . .	125
Anti-Inflammatory Cream . . . . .	126
Oil in Water Cream . . . . .	126
Balancing Cream for Oily Skin . . . . .	127
Barrier Cream(s) . . . . .	128
Barrier Cream—Cold Mix Formula . . . . .	129

Emollient Cream (W/O Emulsion) . . . . .	129
Cleansing Cream(s) (W/O Emulsion) . . . . .	130
Cocoa Butter Skin Cream . . . . .	131
Moisturizing Cream . . . . .	131
Cold Cream . . . . .	132
Dry Skin Cream . . . . .	132
Emollient Cream . . . . .	132
Collagen Cleansing Cream . . . . .	133
Collagen Facial Washing Cream . . . . .	133
Cream . . . . .	134
Day Cream . . . . .	135
Skin Cream . . . . .	135
Dihydroxyacetone Cream (W/O Emulsion) . . . . .	136
Cleansing Cream . . . . .	136
Dry Skin Treatment Cream . . . . .	137
Dry Skin Night Cream . . . . .	137
Emollient Vanishing Cream . . . . .	138
Environmental Protective Cream . . . . .	139
Therapeutic Humectant Creme . . . . .	139
European Night Cream . . . . .	140
Hand Cream . . . . .	140
Extra Body Conditioning Cream . . . . .	141
Lecithin Cream (W/O Emulsion) . . . . .	141
Greaseless Hand Cream . . . . .	142
W/O Night Creme . . . . .	142
Hand Cream . . . . .	143
Hand and Nail Cream . . . . .	144
Hand Cream . . . . .	144
Hydroquinone Bleach Cream . . . . .	145
Moisturizing Cream(s) . . . . .	146
Moisturizing Cream—Oil-Free . . . . .	147
Moisturizing Cream—Cold Process W/O . . . . .	148
Silicone Skin Protection Cream (W/O Emulsion) . . . . .	148
Moisturizing Cream with Aloe Vera . . . . .	149
Multivitamin Moisturizing Cream . . . . .	150
Multivitamin Night Cream . . . . .	151
Night Cream . . . . .	152
Facial Moisture Creme . . . . .	152
Night Cream . . . . .	153
Light Texture Hand Creme . . . . .	153
O/W Hand Cream(s) . . . . .	154
Pearly Foundation Cream . . . . .	156
Protective Day Cream for Normal Skin . . . . .	157
Skin Conditioning Cream . . . . .	158

Greaseless Night Cream	158
Skin Cream(s)	159
Dry Skin Cream	160
Throat and Neck Cream	161
Night Time Moisturizing Cream	161
Under Make-Up Cream Base	162
Cleansing Cream	162
Vitamin Replenishing Cream	163
W/O Body Cream(s)	164
W/O Hand and Body Cream(s)	165
W/O Massage Cream—Hot Process	167
W/O Massage Cream—Cold Process	167
Water/Oil Moisturizing Night Cream with a High Oil Content	168
Night Creme	168

<b>SECTION VI: HAIR CARE PRODUCTS</b>	169
Alcohol-Free Pump Hairspray(s)	170
Hair Moisturizing Spray	170
Alkalizing of Hair	171
Clear Conditioner(s)	172
Cream Rinse Conditioner	175
Cream Rinse Conditioner	175
Clear Conditioner	176
Foaming Anti-Dandruff Hair Conditioner	176
Clear Conditioning Rinse	177
Conditioning Mousse for Hair	177
Clear Gel Activator/Conditioner	178
Gel Activator	178
Clear Hair Reparative and Conditioner	179
Hot Oil Treatment	179
Clear Oil-Free Hair Conditioner Gel	180
Clear Dilutable Gel	180
Conditioner Hair Cream	181
Conditioner Hair Lotion	181
Conditioner Rinse	182
Hair Conditioning Rinse	182
Conditioner That Shampoos	183
Creme Rinse Protein Conditioner	183
Conditioning Hair Pomade	184
Finishing Lotion	184
Conditioning Hair Setting Gel	185
Hot Oil Treatment	185
Conditioning Hair Spritz	186
Emollient Glossing Spritz	186

Conditioning Spritz . . . . .	187
Hair Conditioner . . . . .	187
Cream Conditioner for Permanent-Waved Hair . . . . .	188
Dry and Damaged Hair Conditioner . . . . .	188
Cream Curl Activator . . . . .	189
Cream Rinse . . . . .	190
Replenishing Cream Rinse . . . . .	190
Creme Rinse Economy—Pearlescent . . . . .	191
Creme Rinse Economy—Opaque . . . . .	191
Curl Activator Gel . . . . .	192
Penetrating Gel Base for Hair Products . . . . .	192
Deep Hair Conditioner with Cholesterol . . . . .	193
Sheen Type Hair Conditioner . . . . .	193
Detangling Sheen Conditioner (Pump-Spray) . . . . .	194
Clear Hair Rinse and Conditioner . . . . .	194
Elastic Curl Activator/Conditioner . . . . .	195
Spray Curl Activator . . . . .	195
Enriched Cream Conditioner . . . . .	196
Pump Spray Conditioner . . . . .	196
Glossing Hair Conditioner . . . . .	197
Cream Hair Conditioner . . . . .	197
Guanidine No Base Relaxer . . . . .	198
Hair Relaxer . . . . .	198
Hair Conditioner(s) . . . . .	199
Cold-Mix Hair Conditioner . . . . .	200
Hair Conditioner with Protein . . . . .	201
Clear Crothix Conditioner . . . . .	201
Hair Conditioner and Set (for Use with Hot Air Dryer) . . . . .	202
Conditioning-Styling Mousse . . . . .	202
Hair Conditioning Creme Rinse . . . . .	203
Curl Activator . . . . .	203
Hair Finishing Mist . . . . .	204
Comb Through Glosser . . . . .	204
Hair Pomade(s) . . . . .	205
Hair Relaxer(s) . . . . .	207
Hair Repair and Conditioner . . . . .	208
Soft Set Conditioning Mousse . . . . .	208
Hair and Scalp Conditioner . . . . .	209
Light Hair Conditioner . . . . .	209
Hair Setting Gel . . . . .	210
Hair Gel . . . . .	210
Hair Setting Lotions Containing a Chitosan Derivative . . . . .	211
Hair Styling Gel with Oil . . . . .	212
Hair Setting Gel . . . . .	212



Highlighting Hair Gel	213
Instant Hair Conditioner(s)	214
Liquid Brilliantine	215
Solid Brilliantine(s)	215
Lotion Moisturizer	216
Oil Moisturizer Lotion	216
Moisturizing Conditioner	217
Clear Hair Conditioner	217
Moisturizing Elastin Hair Styling Gel	218
Pump Spray Hair Detangler	218
Opaque Hair and Scalp Moisturizer	219
Hair Moisturizer	219
Pomade(s)	220
Pomade with Lanolin	220
Pomade with Protein	220
Pomade Hair Dressing	221
Pomade Stick	221
Professional Extra-Strength Relaxer	222
Professional No Base Relaxer C	222
Relaxer(s)	223
RinginG Gel(s)	224
Sculpting Gel	225
Pump Gel Setting Lotion	225
Sea Botanical and Herbal Hard to Hold Styling Gel	236
Sea Botanical and Herbal Hard to Hold Styling Gel (Alcohol-Free)	226
Sea Botanical and Herbal Hard to Hold Styling Gel (TEA-Free)	227
Styling Gel with Protein	227
Spray-On Detangler	228
Spray Detangler	228
Two Phase Conditioner	229
Instant Conditioner	229

<b>SECTION VII: INSECT REPELLENTS</b>	230
Gelled DEET(s)	232
Pyrocidc and MGK Intermediates	234
Repellent Stick	236
Repellent Roll-On	236
Spray Pump Formulations	237
Specimen Label(s)	239
Pressurized Insect Repellent Spray	239
Liquid Insect Repellent	239
Saturated Paper Towel Repellent	240

Insect Repellent Gel . . . . .	240
Insect Repellent Stick . . . . .	240
Insect Repellent Cream . . . . .	241
Pyrocide and MGK Intermediate . . . . .	241
General Formulation Information for Pressurized Spray . . . . .	242

<b>SECTION VIII: LOTIONS . . . . .</b>	<b>243</b>
Aloe Lotion . . . . .	244
Keri-Type Lotion . . . . .	244
All Purpose Skin Lotion . . . . .	245
Lotion for Normal-Oily Skin . . . . .	245
Body Lotion . . . . .	246
Behenyl Hand Lotion . . . . .	246
Body Massage Lotion . . . . .	247
Temporary Anti-Wrinkle Lotion . . . . .	247
Cationic Conditioning Lotion . . . . .	248
Hand and Body Lotion . . . . .	248
Cleansing Lotion(s) . . . . .	249
Cold Mix—W/O Emulsion Dihydroxyacetone Lotion . . . . .	251
Skin Softening Lotion (W/O Emulsion—Cold Process) . . . . .	251
Hand and Body Lotion(s) . . . . .	252
High Humectant Lotion . . . . .	254
Fragrance Lotion . . . . .	254
Lotion . . . . .	255
Body Lotion . . . . .	255
Lotion . . . . .	256
Hand Lotion . . . . .	256
Lotion . . . . .	257
Hand and Body Lotion . . . . .	257
Low Solids Anionic Lotion . . . . .	258
Cationic Lotion . . . . .	258
Lubriderm Type Lotion . . . . .	259
Lubriderm Type Lotion with 1% Patlac IL . . . . .	259
Moisturizing Lotion(s) . . . . .	260
Moisturizing Lotion(s) (Cold Preparation) . . . . .	262
Moisturizing Lotion . . . . .	263
Deep Moisturizing Lotion . . . . .	263
Moisturizing Lotion(s) . . . . .	264
Moisturizing Cleansing Lotion . . . . .	265
Light Emollient Lotion with Pseudocollagen . . . . .	265
Moisturizing Cleansing Lotion . . . . .	266
Pourable Moisturizing Lotion . . . . .	266
Multivitamin Hand and Body Lotion . . . . .	267
Nonionic Hand Lotion with Chlorhexidine Gluconate . . . . .	268

Deodorizing Hand Lotion . . . . .	268
Nonionic Hand Lotions with Chlorhexidine Gluconate . . . . .	269
O/W Hand and Body Lotion(s) . . . . .	270
Pearl Premix . . . . .	271
Clear Dilutable Gel . . . . .	271
Protective Hand and Body Lotion . . . . .	272
Protective Skin Lotion . . . . .	273
Silicone Lotion (Water/Oil) . . . . .	273
Rich Moisturizing Skin Lotion . . . . .	274
Light Emollient Lotion with Pseudocollagen . . . . .	274
Silky Hand Lotion with Silicone . . . . .	275
Hand and Body Lotion . . . . .	275
Skin Lotion . . . . .	276
Hand and Body Lotion(s) . . . . .	276
W/O Alcohol Lotion(s) . . . . .	277
<b>SECTION IX: SHAMPOOS . . . . .</b>	<b>278</b>
Aloe Shampoo and Body Wash . . . . .	279
Deodorizing Shampoo . . . . .	279
Amide Free Viscous Clear Shampoo with Pationic ISL . . . . .	280
Low Irritation/Sting Shampoo with Pationic 138C . . . . .	280
Amide Free Viscous Clear Shampoo with R.I.T.A. Complex A and B . . . . .	281
Amphoteric Shampoo with Sunscreen . . . . .	282
Conditioning Shampoo . . . . .	282
Anti-Dandruff Shampoo(s) . . . . .	283
Conditioning Gel Shampoo . . . . .	286
Anti-Dandruff Shampoo . . . . .	287
Viscous, Low Cost Shampoo . . . . .	287
Cleansing Shampoo . . . . .	288
Gentle Cleansing Shampoo . . . . .	288
Clear Conditioning Shampoo . . . . .	289
Clear Protein Shampoo . . . . .	290
Clear Conditioning Shampoo(s) . . . . .	290
Clear Bar Conditioning Shampoo . . . . .	292
Clear Shampoo(s) . . . . .	293
Clear Shampoo for Oily Hair . . . . .	294
Clear Shampoo for Normal to Dry Hair . . . . .	294
Clear Viscous Shampoo . . . . .	295
Every Day Shampoo . . . . .	295
Conditioning Mousse Shampoo with Vitamins . . . . .	296
Vitamin Moisturizing Shampoo . . . . .	296
Conditioning Shampoo(s) . . . . .	297
Conditioning/Highlighting Shampoo . . . . .	299

Conditioning Shampoo .....	300
Clear Conditioning Shampoo .....	300
Conditioning Shampoo .....	301
Conditioning Shampoo for Dry Hair .....	301
Conditioning Shampoo .....	302
Family Shampoo .....	302
Dandruff Control Shampoo(s) .....	303
Detangling Shampoo(s) .....	304
Economy Shampoo(s) .....	305
Everyday Soft Highlights Shampoo .....	306
Three in One Shampoo .....	306
Extra Mild Pearlized Shampoo .....	307
Cold Process Pearlized Shampoo .....	307
Family Shampoo .....	308
Zinc Pyrithione Containing Shampoo .....	308
Gel Shampoo(s) .....	309
Gel Shampoo—15.0% Active .....	310
Gelled Alkaline Shampoo—A Shampoo with Alkaline pH .....	310
Glossing Shampoo .....	311
Shampoo .....	311
Hair Repair Shampoo .....	312
Shampoo for Dyed and Permed Hair .....	312
High Active Clear Gel Shampoo .....	313
Low pH Gel Shampoo .....	313
Improved Combing Conditioning Shampoo .....	314
Soft Highlights—Conditioning Shampoo .....	314
Low Cost Clear Shampoo .....	315
High Performance Shampoo .....	315
Low Cost Clear Shampoo (Cold Process) .....	316
Luxurious Shampoo with Soap-Like Feel .....	316
Low Irritation/Sting Shampoo .....	317
Low Irritation Shampoo .....	317
Low Sting Shampoo(s) .....	318
Maximum Conditioning Shampoo .....	321
2:1 Conditioning Shampoo .....	321
Mild Shampoo .....	322
Mild High Foaming Shampoo (28% Active) .....	322
Mild Conditioning Shampoo(s) .....	323
Neutralizer Shampoo .....	324
Pationic SSL Lotion Shampoo .....	324
Normal Hair Shampoo .....	325
Gel Shampoo .....	325
Pearlescent Shampoo .....	326
Moisturizing Shampoo .....	326

Pearlized Alkaline Shampoo . . . . .	327
Pearlized Gel Shampoo . . . . .	327
Pearlized Conditioning Shampoo . . . . .	328
Conditioning Shampoo . . . . .	328
Pearlized Shampoo(s) . . . . .	329
Premium Shampoo . . . . .	331
Clear Gel Shampoo . . . . .	331
Protein Shampoo . . . . .	332
Protein Enriched Shampoo . . . . .	332
Protein Shampoo—Normal Hair . . . . .	333
Mild Shampoo . . . . .	333
Shampoo for Normal Hair . . . . .	334
Conditioning Shampoo with Lactylate and Cationic . . . . .	334
Shampoo for Normal Hair . . . . .	335
Salt Free Economy Shampoo . . . . .	335
Shampoo for Normal to Oily Hair . . . . .	336
Shampoo for Oily Hair . . . . .	336
Shampoo with Protein for Damaged Hair . . . . .	337
Lotion Shampoo with Protein . . . . .	337
2 in 1 Conditioning Shampoo . . . . .	338
Clear Conditioning Shampoo . . . . .	338
2 in 1 Conditioning Shampoo . . . . .	339
Shampoo with Protein . . . . .	339

<b>SECTION X: SHAVING PRODUCTS . . . . .</b>	<b>340</b>
After Shave Lotion—O/W Emulsion . . . . .	341
W/O After Shave Lotion . . . . .	341
Shave Cream(s) . . . . .	342

<b>SECTION XI: SOAPS AND HAND CLEANERS . . . . .</b>	<b>343</b>
Clear Body Shampoo . . . . .	344
Pearlescent Body Soap . . . . .	344
Liquid Soap . . . . .	345
Liquid Hand Soap . . . . .	345
Clear Liquid Hand Soap(s) . . . . .	346
Conditioning Hand Soap . . . . .	347
Emollient Liquid Hand Soap . . . . .	347
Cold Process Waterless Hand Cleaner . . . . .	348
Non-Mineral Spirits Waterless Handcleaner . . . . .	348
Handcleaner . . . . .	349
Hand Cleanser . . . . .	349
Hand Cleaner . . . . .	350
Non-Drying Lotion Hand Cleaner . . . . .	350
Liquid Hand Soap . . . . .	351

Hand Soap . . . . .	351
Liquid Hand Soap—Clear Type . . . . .	352
Liquid Hand Soap—Pearlescent Type . . . . .	352
Liquid Handwashing Cleanser . . . . .	353
and Cleaner with Pumice . . . . .	353
Liquid Soap . . . . .	354
Liquid Soap (Pearlized) . . . . .	354
Lotion Hand Cleaner(s) . . . . .	355
Mild Hand Soap . . . . .	356
Pearlized Hand Soap . . . . .	356
Moisturizing Liquid Hand Soap . . . . .	357
Germicidal Hand Cleanser . . . . .	357
Neutral pH Detergent Bar(s) . . . . .	358
Solid Iodophor Cleansing Bar . . . . .	358
Non-Drying Lotion Hand Cleaner(s) . . . . .	359
Waterless Handcleaner . . . . .	360
Pearlized Liquid Soap(s) . . . . .	361
Sanitizing Hand Soap . . . . .	362
Skin Conditioning Liquid Soap . . . . .	363
Clear Gel Hand Soap . . . . .	363
Gel Waterless Hand Cleaner . . . . .	364
Slow Setting Gel Waterless Hand Cleaner . . . . .	364
Waterless Hand Cleaner . . . . .	364
Slow Set Waterless Hand Cleaner . . . . .	365
Fast Set Waterless Hand Cleaner . . . . .	365
Soft Skin Liquid Soap . . . . .	366
Conditioning Liquid Soap . . . . .	366
Soap Base Beauty Bar . . . . .	367
Liquid Soap . . . . .	367
Transparent Liquid Soap . . . . .	368
Waterless Handcleaner . . . . .	369
Waterless Hand Cleanser with Antimicrobial Properties . . . . .	371
Waterless Hand Cleaner . . . . .	371
<b>SECTION XII: SUN CARE PRODUCTS . . . . .</b>	<b>372</b>
All Natural Tan Glow Intensifying Gel . . . . .	373
Sun Stick . . . . .	373
Improved Wear Sunscreen . . . . .	374
Clear Anhydrous Sunscreen . . . . .	374
Lip Balm(s) with Sunscreen . . . . .	375
"PABA Free" Waterproof Sunscreen (Approximately SPF 6) . . . . .	376
Waterproof Sunscreen SPF 22 . . . . .	376
Pearlescent Waterproof Sun Creme . . . . .	377
Moisturizing Water Resistant Sunscreen Gel . . . . .	377

Pearly Bronze/Copper Suntan Cream	378
Sunscreen Cream (SPF 15)	378
Presun Moisture Accelerator	379
After Sun Moisturizer	379
Protective Skin Product with Sunscreen	380
Sunscreen Cream	380
Sprayable Sunscreen	381
Suntan Cream	381
Sun Care—Suntan Oil	382
Sun Care—Suntan Lotion	382
Sun Protection Cream (O/W) SPF 5	383
Sunscreen Oil	383
Sun-Protection-Gel (Aqueous)	384
Sun Protection Cream (O/W) SPF-5	384
Sun Protection Lotion(s)	385
Sunscreen Cream with $\text{TiO}_2$	387
Sunscreen Lotion Containing $\text{TiO}_2$	387
Sunscreen Gel	388
Sunscreen Moisturizing Cream	388
Sunscreen—High SPF Formulation	389
Waterproof Sunscreen Formulation	389
Sunscreen Lotion	390
Sunscreen Oil	390
Sunscreen Lotion	391
Cooling Suntan Lotion	391
Sun Screen Oil	392
Sun Screen Gel	392
Sunscreen Oil	393
Sun Stick	393
Sunscreen—O/W with Ethanol	394
Titanium Dioxide Sunscreen	394
Suntan Lotion(s)	395
Bronzer Gel	396
Tanning Accelerator Formulation	397
Tanning Oil	397
Titanium Dioxide Based Waterproof Sunscreen(s) (SPF 12)	398
Waterproof Sun Protection Lotion (SPF 18)	399
W/O Natural Sun Protection Lotion	399
Waterproof Sunscreening Cream (O/W) (SPF 8)	400
Body Spray After Sun Burn	400
Water-Resistant Suntan Lotion	401
Waterproof High SPF Sun Protection Lotion (W/O Emulsion) (SPF 18)	402

Waterproof Sun Protection Lotion (with 8% Titanium Dioxide) (SPF 12) .....	402
Waterproof W/O Sunscreen Lotion (PABA) (SPF 12) .....	403
Waterproof W/O Sunscreen Lotion (PABA/Melanin) (SPF 15) ....	403
Waterproof W/O Sunscreen Lotion (PABA) (SPF 18) .....	404
Waterproof W/O Sunscreen Lotion (PABA) (SPF 17) .....	404
Waterproof W/O Sunscreen Lotion (SPF 18) .....	405
Waterproof W/O Sunscreen Lotion (SPF 22) .....	405
W/O Sunscreen Lotion with Melanin (0.05% Active) .....	406
W/O Sun Protection Lotion (Maximum Protection) .....	406
W/O Sunscreen Lotion with Melanin (0.5% Active) .....	407
Waterproof Sunscreen Lotion (SPF 15) .....	407
<b>SECTION XIII: MISCELLANEOUS</b> .....	408
Antimicrobial Topical Gel .....	409
Syndet Bar .....	409
Eucalyptus + Mint Emulsion .....	410
Eucalyptus + Mint Type Ointment .....	410
Fluoride Dentifrice .....	411
Mouthwash .....	411
Gum-Massage Gel .....	411
High Quality Dog Shampoo .....	412
Mild Dog Shampoo .....	412
Lipid- and Vitamin-Containing Liposome Gel .....	413
Rheumagel With (Without) Camphor .....	413
Oil in Water Cream Base .....	414
Anhydrous Ointment Base .....	414
Oil/Water Emulsions With and Without PG-3 Beeswax .....	415
Premium Mild Dog Shampoo .....	416
Premium Dog Shampoo .....	416
Water-in-Oil Emulsion Base .....	417
All Purpose Aloe Vera Gels .....	417
<b>SECTION XIV: TRADE-NAMED RAW MATERIALS</b> .....	418
<b>SECTION XV: SUPPLIERS' ADDRESSES</b> .....	458



# **Section I**

## **Antiperspirants and Deodorants**

Antiperspirant Lotion

This formulation is designed for "roll-on" containers.

Ingredients:

	% W/W
1. Distilled Water	+42.50
2. Veegum	1.25
3. Ritapro 165	7.50
4. Ritachol	2.00
5. Laneto 100	1.00
6. Propylene Glycol	3.75
7. Ritachlor (50%)	42.00
8. Fragrance	QS

Compounding Procedure:

Weigh and add item 1 into a container and begin stirring. A variable speed propeller-type stirrer is recommended. Add item 2 and stir until dispersion is complete. Weigh and add items 3, 4 and 5 into another container. Begin stirring and heating this blend to 70-73C. Heat the water-containing blend to 70-73C. When both blends are at 70-73C, add the Laneto 100-containing blend to the water blend. Continue stirring with an agitator similar to the one described above. When all the Laneto 100-containing blend has been added begin cooling the batch. Cool to 40-43C and add the remaining ingredients. Package at 25-30C.

Formulation HB-89-L-30

Roll-On AntiperspirantIngredients:

	% W/W
1. Hydroxypropyl Methylcellulose	0.65
2. SD Alcohol 40	20.00
3. Laneto 50	4.00
4. Pationic ISL	2.00
5. Distilled Water	+53.35
6. Ritachlor	20.00
7. Color, Fragrance, Preservatives	QS

Compounding Procedure:

Disperse item 1 into 2; add item 4. Combine items 3 and 5. Add the alcohol solution to the water solution slowly with gentle stirring. Add remaining ingredients slowly with gentle stirring.

Formulation HB-89-L-31

SOURCE; R.I.T.A. Corp.; Suggested Formulations

Antiperspirant Stick

<u>Ingredient:</u>		<u>Wt. %</u>
Methyl Stearoxo Dimethicone	Masilwax 135	3.0
Cyclomethicone	Masil SF-V	45.5
POE 6000 Distearate	Mapeg 6000DS	3.0
PEG-32	Macol E1450	2.0
Stearyl Alcohol	CO-1895	24.0
Talc	Supra	2.0
Al Zr Tetrachlorohydrate Gly	Rezal 36GP	20.0
Fragrance		0.5

Appearance: White, uniform stick. Excellent application properties.

Melt Point: 52C

Observation: Significantly less syneresis vs. similar sticks without Masilwax.

Procedure:

Heat Masilwax, Masil SF-V, Macol E1450 and Mapeg 6000DS to 65C (150F). Keep batch covered to avoid Silicone loss. Add Stearyl Alcohol. When uniform, add talc and Rezal 36GP. Mix with good shear until the solids are uniformly dispersed. Cool to 55C (130F), add fragrance, and fill. Chill sticks at 5C (40-45F) to speed solidification.

SOURCE: PPG Industries, Inc.: Formulation Q-101

Antiperspirant Gel

This product in gel form will serve as a moisturizer for the skin with effective antiperspirant action. It will help to ensure that the active ingredient stays in uniform suspension during processing and cooling.

	<u>% (w/w)</u>
Lexquat AMG-0	35.00
Lipocol O-20	35.00
AZG-368 Solution	30.00

Procedure:

Charge batch vessel with Lexquat AMG-0. Begin mixing and heating to 65C. Slowly add the AZG-368 with slow mixing. When completely mixed, add the Lipocol O-20 (previously melted). Mix until uniform. Cool to 40C. Pour into container and cool to 25C.

SOURCE: Inolex Chemical Co.: Formulation AD-100

### Clear Roll-On Antiperspirant

This aqueous system contains sufficient ethanol to dry quickly on the skin; once dry, it is non-tacky. The use of Laneto 100 reduces the usual tackiness of the aluminum antiperspirant active ingredients.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Cellosize QP 4400	0.20
2. Distilled Water	29.70
Part B:	
3. Benzethonium chloride	0.10
4. Distilled Water	8.00
5. Alcohol SD 40	20.00
6. Laneto 50	7.00
Part C:	
7. Ritachlor 50%	35.00

#### Compounding Procedures:

Prepare Part A in advance, to allow the gum to hydrate fully before incorporation into the product. Slowly add Part B to Part A at room temperature with high speed propeller agitation. Finally, slowly add Phase C with high speed stirring. Perfume, if any, is added to Part B.

Formulation 101-132/HB-89-1-19

### Antiperspirant Lotion

The lotion antiperspirant has been an attractive formula over the years, due to its versatility and various applications.

<u>Ingredients:</u>	<u>% W/W</u>
1. Ritapro 200	4.60
2. Laneto 50	8.80
3. Mineral Oil (65/75 Viscosity)	9.00
4. Ritachlor 50%	40.00
5. Distilled Water	37.60

#### Compounding Procedures:

Melt Ritapro 200 and mineral oil at 75C. Add preheated water and Laneto 50 and mix to form emulsion. When cool, add Ritachlor 50% slowly. Continue mixing until complete.

Formulation 101-131/HB-89-L-20

SOURCE: R.I.T.A. Corp.: Suggested Formulations

**Deodorant Cologne**

<u>Ingredients:</u>	<u>% W/W</u>
1. SD Alcohol 40	60.00
2. Propylene Glycol	3.00
3. Laneto 50	2.00
4. Grillocin HY-77	3.00
5. Methylparaben	0.15
6. Perfume	QS
7. Distilled Water	31.85

**Compounding Procedure:**

Weigh and add the Alcohol into a container and begin stirring and warming. Warm the Alcohol to 50-55C and add all of the ingredients WITH THE EXCEPTION OF THE PERFUME. Stir until a homogeneous blend results. Begin cooling the blend, while stirring continuously. Cool to 40-43C and add the remaining ingredients. Cool to 25-30C while stirring continuously. Package fill into suitable containers.

NOTE: Explosion proof mixing and handling equipment should be used.

Formulation H-89-G-4

**Deodorant Spray (Pump Dispensing)**

This formulation combines deodorant, anti-microbial effects and a pleasant fragrance. Grillocin HY-77 has good deodorant properties that eliminate the presence and perception of unpleasant odor. This product is designed for packaging into a container fitted with a pump.

<u>Ingredients:</u>	<u>% W/W</u>
1. SD Alcohol 40	92.90
2. Grillocin HY-77	5.00
3. Laneto 50	2.00
4. Triclosan	0.10
5. Fragrance	QS
6. Color	QS

**Compounding Procedure:**

Weigh and add all ingredients into a suitable container. All mixing equipment should be equipped so that it is "explosion proof". Stir until a uniform dispersion results. Package fill into suitable containers.

Formulation H-89-G-5

SOURCE: R.I.T.A. Corp.: Suggested Formulations

**Deodorant Stick Without Alcohol**

A stick formula which combats odor and inhibits odor development.

<u>Ingredients:</u>	<u>% W/W</u>
1. Disorbene	2.50
2. Dehydrol LS 3	4.00
3. PEG 200	20.00
4. Dipropyleneglycol	50.00
5. 1,2 Propyleneglycol	10.00
6. Grilloclin CW 90	1.50
7. FD&C Blue #1 (1% in H <sub>2</sub> O)	0.05
8. Perfume	QS
9. Distilled Water	11.95

**Compounding Procedures:**

Dissolve Disorbene in PEG 200, Dipropyleneglycol and Propyleneglycol by heating and mixing (about 85C). Add Grilloclin CW 90 and Dehydrol LS 3. Stop heating. Add water and cool to about 70C. Add perfume and coloring agent. Pour in final packaging and cool down until room temperature.

SOURCE: R.I.T.A. Corp.: Formulation 111-185

**Antiperspirant Cream**

Mineral oil	)	10.0%
Ionol C.P. antioxidant	) Part A	0.1%
Monamid 150-IS	)	2.0%
Chlorhydrol 50%	)	40.0%
Monawet SNO-35	) Part B	1.4%
Water, deionized	)	46.5%

Mix Part A and Part B separately, in the order listed, then add Part B to Part A with rapid mechanical stirring. This cream is a heavy, water-in-oil emulsion which has excellent stability.

SOURCE: Mona Industries, Inc.: Suggested Formulation

**Antiperspirant Gel**

This product in gel form will serve as a moisturizer for the skin with effective antiperspirant action. It will help to ensure that the active ingredient stays in uniform suspension during processing and cooling.

	<u>% (w/w)</u>
Lexquat AMG-O	35.0
Lipocol O-20	35.0
AZG-368 Solution	30.0

**Procedure:**

Charge batch vessel with Lexquat AMG-O. Begin mixing and heating to 65C. Slowly add the AZG-368 with slow mixing. When completely mixed, add the Lipocol O-20 (previously melted). Mix until uniform. Cool to 40C. Pour into container and cool to 25C.

SOURCE: Inolex Chemical Co.: Formulation AD-100

Deodorant Stick

The deodorant stick is designed to be dispensed by pushing up a movable bottom plate or by rotating a screw-like mechanism. The formulation which can be pleasantly scented, creates a cooling sensation due to the evaporation of volatile solvent.

<u>Ingredients:</u>	<u>% W/W</u>
1. SD Alcohol 40	62.25
2. Propylene Glycol	15.00
3. Grillocin HY-77	3.00
4. Pationic ISL	1.75
5. Sodium Stearate C-7	8.00
6. Distilled Water	10.00
7. Color, Fragrance	QS

Compounding Procedure:

Combine ingredients 1,2,4 and 5; then heat to 70C. Add ingredients 6 and 3. Mix until uniform. Cool to 60C. Add remaining ingredients. Fill at 55C.

Formulation H-89-G-8

Deodorant Cream

Grillocin PY-88 has good deodorant properties that eliminate the presence and perception of unpleasant odors.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Rita GMS	4.00
2. Isopropyl Myristate	4.00
3. Rita CA	2.70
4. Ritacet-20	2.00
5. Grillocin PY 88 Pellets	2.00
6. Beeswax	1.00
Part B:	
7. Distilled Water (90C)	83.75
Part C:	
8. Patlac LA	0.20
9. Perfume	0.20
10. Euxyl K 400	0.15

Compounding Procedures:

Heat Part A up to 80C. Stir hot water into Part A. Add the other ingredients at 35C.

Formulation 111-162

SOURCE: R.I.T.A. Corp.: Suggested Formulations

**Deodorant Stick**

This product is a solid stick deodorant for use in a cylindrical dispensing container. It applies easily and smoothly, dries quickly and offers excellent deodorant characteristics. Grillocin HY-77 has been included because of its unique odor-removing ability.

<u>Ingredients:</u>	<u>% W/W</u>
1. SD Alcohol 40	70.90
2. PEG-8	10.00
3. Triclosan	0.10
4. Grillocin HY-77	3.50
5. Sodium Stearate C-7	7.50
6. Distilled Water	8.00
7. Color	QS
8. Fragrance	QS

**Compounding Procedure:**

Weigh and add ingredient 1 into a container and begin stirring and heating. All heating and stirring equipment should be equipped so that it is "explosion proof." A variable speed agitator equipped with a propeller-type stirrer is recommended. Weigh and add ingredient 5 (Sodium Stearate C-7), stirring continuously while continuing to heat. Weigh and add ingredients 2, 3, 4 and 6 and continue stirring and heating. Heat to approximately 55-60C until all the Sodium Stearate C-7 is melted. After the Stearate is melted and the product is uniform, begin cooling the batch. Cool to about 55-60C. Package into suitable containers. The containers will have to be placed in molds to accommodate sufficient stick mass to allow for shrinkage.

Formulation H-89-G-6

**Glycerin-Based Deodorant Gel**

<u>Ingredients:</u>	<u>% W/W</u>
1. Pationic SSL	10.00
2. Glycerin	73.10
3. Grillocin HY-77	0.80
4. Stearic Acid	+8.40
5. Sodium Hydroxide (18% Solution)	+ -1.20
6. Distilled Water	6.50
7. Color, Fragrance, Preservatives	QS

**Compounding Procedure:**

Combine ingredients 1 and 2 and heat with mixing to 65C; add ingredient 3. Heat to 65C. Add ingredient 4. Maintain 65C. Combine both phases with mixing. Cool with stirring to 50C and add remaining ingredients. Fill into proper containers. Mix while filling.

Formulation H-89-G-7

**SOURCE: R.I.T.A. Corp.: Suggested Formulations**



Liquid Antiperspirant Emulsion

Liquid antiperspirants have been attractive formulas over the years, due to their versatility and various applications.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Ritapro 165	13.00
Part B:	
2. Laneto 50	4.00
3. Ritachlor 50%	40.00
4. Distilled Water	43.00
Part C:	
5. Perfume	QS

Compounding Procedures:

Heat Part A to 70C. Heat Part B to 72C. With mixing, slowly add water phase to oil phase. Cool to 45C. Add perfume.

Formulation 101-133

Stick Deodorant

A sodium stearate stick which combats odor and inhibits odor development with propylene glycol, Grilloclin and perfume.

<u>Ingredients:</u>	<u>% W/W</u>
1. Stearic Acid XXX	7.00
2. SD Alcohol 40	41.00
3. Sodium Hydroxide USP (20% solution in distilled water)	15.00
4. Propylene Glycol	35.00
5. Grilloclin HY-77	2.00
6. Perfume	QS

Compounding Procedure:

Weigh and add ingredients 1-2 into a container and begin stirring and heating. Heat to 75-78C. Weigh and add ingredients 4 and 5 into another container and begin stirring and heating. Heat the blend of ingredients 4 and 5 to 75-78C. When the 1-2 ingredient blend and the 4 and 5 ingredient blend are both at 75-78C, add the 4 and 5 ingredient blend to the 1-2 ingredient blend. Add ingredient 3. Mix until uniform. Begin cooling while stirring continuously. At 60C, add ingredient 6. Package at approximately 55C.

**Note:** Explosive proof mixing and handling equipment should be used.

Formulation H-89-G-3

**SOURCE:** R.I.T.A. Corp.: Suggested Formulations

**Dry Roll-On Antiperspirant-A**

<b><u>Ingredients:</u></b>	<b><u>% W/W</u></b>
Phase A:	
Cetyl Dimethicone (Abil Wax 9801)	0.50
Isopropyl Myristate (Tegosoft M)	5.00
Cyclomethicone (Abil B 8839/DC 344)	40.00
Quaternium 18 Hectorite (Bentone 38 Powder)	2.00
Ethanol - 200 proof or Ethanol - 190 proof	2.00
Phase B:	
Isopropyl Myristate (Tegosoft M)	5.00
Cyclomethicone (Abil B 8839/DC 344)	20.50
Phase C:	
Aluminum Chlorohydrate	25.00
Phase D:	
Perfume	QS

**Dry Roll-On Antiperspirant-B**

<b><u>Ingredients:</u></b>	<b><u>% W/W</u></b>
Phase A:	
Cetyl Dimethicone (Abil Wax 9801)	0.50
Isopropyl Myristate (Tegosoft M)	5.00
Cyclomethicone (Abil B 8839/DC 344)	40.00
Quaternium 18 Hectorite (Bentone 38 powder)	2.00
Ethanol - 200 proof or Ethanol - 190 proof	2.00
Phase B:	
Hexyl Laurate (Henkel - Standamul CTA or Cetrol A)	3.00
Cyclomethicone (Abil B 8839/DC 344)	22.50
Phase C:	
Aluminum Chlorohydrate	25.00
Phase D:	
Perfume	Q.S.

**Procedure:**

1. Blend Abil Wax 9801, Abil B 8839 and Isopropyl Myristate. Sprinkle in Bentone 38 powder, avoiding lumps, while using a high speed mixer.
2. Add Ethanol. 190 proof is preferred. Mix. Process through homogenizer with shear until a clear soft gel or clear medium viscosity liquid is formed.
3. Mix Phase B. Add Aluminum Chlorohydrate. Mix until uniform. Add to Phase A gel. Mix/homogenize until well dispersed.
4. Add perfume. Mix.

**SOURCE: Goldschmidt Chemical Corp.: Suggested Formulations**

**Nonwhitening Antiperspirant Solid**

A cyclomethicone/stearyl alcohol suspensoid solid with nonoily application and nonwhitening properties provided by Masil 756.

<u>Part:</u>	<u>Ingredients:</u>		<u>Wt. %</u>
A	Stearyl Alcohol	CO-1895	22.0
	Hydrogenated Castor Oil	Castorwax	1.0
	Glyceryl Stearate (and)		
	PEG-100 Stearate	Mazol 165C	1.0
B	Tetrabutoxypropyl Methicone	Masil 756	5.0
	Al Zr Tetrachlorohydrate Gly	Rezal 36GP	20.0
	Talc	Olympic Talc	2.0
C	Cyclomethicone	Masil SF-V	49.0
	Fragrance		Q.S.

**Procedure:**

Blend and heat the part A ingredients to 65C. When molten and uniform, add the part B ingredients with good agitation to disperse. Add the cyclomethicone, maintaining the temperature at 60-65C. When uniform, cool to 55C and add fragrance if desired, and fill. Chill the sticks at approximately 5C to speed solidification.

Formulation Q-102

**Nonwhitening Antiperspirant Solid**

A firm, uniform suspensoid solid with smooth application, nongreasy afterfeel, and less white residue.

<u>Part:</u>	<u>Ingredient:</u>		<u>Wt.</u>
A	Cyclomethicone	Masil SF-V	43.0
	PPG-10 Butanediol	Macol 57	12.0
	Benzyl Laurate	Mazon EE-1	3.0
B	Stearyl Alcohol	CO-1895	20.0
	Hydrogenated Castor Oil	Castorwax	2.0
C	Al Zr Tetrachlorohydrate GLY	Rezal 36GP	20.0
	Fragrance		QS

**Procedure:**

Blend and heat the part A ingredients to 65C. When molten and uniform, add the part B ingredients, maintaining the temperature and mixing until dissolved. Add the antiperspirant salt with good mixing to wet out and suspend the powder. Cool to 55C, add fragrance if desired, and fill. Chill the sticks at 5C to speed solidification.

Formulation Q-103

SOURCE: PPG Industries, Inc.: Suggested Formulations

**Nonwhitening Antiperspirant Solid**

A firm, uniform suspensoid solid with smooth application, nongreasy afterfeel, and less white residue.

<u>Part:</u>	<u>Ingredient:</u>		<u>Wt. %</u>
A	Cyclomethicone	Masil SF-V	43.0
	PPG-10 Butanediol	Macol 57	12.0
	Benzyl Laurate	Mazon EE-1	3.0
B	Stearyl Alcohol	CO-1895	20.0
	Hydrogenated Castor Oil	Castorwax	2.0
C	Al Zr Tetrachlorohydrax GLY	Rezal 36GP	20.0
	Fragrance		QS

**Procedure:**

Blend and heat the part A ingredients to 65C. When molten and uniform, add the part B ingredients, maintaining the temperature and mixing until dissolved. Add the antiperspirant salt with good mixing to wet out and suspend the powder. Cool to 55C, add fragrance if desired, and fill. Chill the sticks at 5C to speed solidification.

SOURCE: PPG Industries, Inc.: Formulation Q-103

**Antiperspirant Solid**

<u>Materials:</u>	<u>Part/Wt (%)</u>
SF-1202	45.0
SF-96-100	5.0
Stearyl Alcohol	19.0
Castor Wax 70	3.0
Talc	4.0
Arlacel 165	2.0
Aluminum Zirconium Tetrachlorohydrax-Gly (ZAG)	22.0

**Procedure:**

- 1) Mix SF1202 and stearyl alcohol.
- 2) Add ZAG, talc and Arlacel 165.
- 3) Heat to 75C and stir with moderate agitation until all wax is melted.
- 4) Pre-melt caster wax and add to mixture as a liquid and stir for 15 minutes.
- 5) Cool mixture to 55C with continued mixing and pour into container. Cool (avoid air entrapment due to excessive mixing speeds).

SOURCE: GE Silicones: Formulation AP100A

**"Roll-On" Deodorant Antiperspirant**

A roll-on formula which does not dry tacky and does not contain gums.

<u>Ingredients:</u>	<u>% W/W</u>
1. Ritachol 1000	5.00
2. Isopropyl Myristate	5.00
3. Grillocin HY-77	1.00
4. Ritachlor (Aluminum Chlorohydrate 50%)	50.00
5. Sorbitol	5.00
6. Distilled Water	34.00
7. Perfume	QS

**Compounding Procedure:**

Weigh and add ingredients 1-3 into a container. Begin stirring and heating the blend. Heat to 70-73°C. Weigh and add ingredients 4-6 into another container and begin stirring and heating. Heat the 4-6 ingredient blend to 70-73°C. Add the 4-6 ingredient blend to the 1-3 ingredient blend while continuously stirring to ensure good emulsification. Cool to 30-35°C and add ingredient 7. Package at 25-28°C.

Formulation H-89-G-1

**Deodorant Antiperspirant Stick**

A tri-function product which utilizes sodium stearate made in situ. Prevents perspiration, delivers fragrance, controls objectionable odor.

<u>Ingredients:</u>	<u>% W/W</u>
1. Grillocin HY-77	2.00
2. Ritachlor (Aluminum Chlorohydrate 50%)	50.00
3. Stearic Acid XXX	7.00
4. Propylene Glycol	24.00
5. Distilled Water	5.00
6. Sodium Hydroxide USP (15% solution in distilled water)	12.00
7. Perfume	QS

**Compounding Procedure:**

Weigh and add ingredients 4, 5 and 6 into a container. Commence stirring and heating this blend. Heat the blend to 70-73°C and maintain this temperature. Combine 1-3, mix thoroughly and add this to the batch. Continue stirring and maintaining the temperature at 70-73°C. Cool to 55-60°C. Add perfume and package.

Formulation H-89-G2

**SOURCE R.I.T.A. Corp.: Suggested Formulations**

**Solid Stick Antiperspirant-A**

<u>Ingredients:</u>	<u>% w/w</u>
Lanette 18 DEO	15.00
Castorwax MP-80	4.00
Fluid AP	1.50
Cyclomethicone (Abil B 8839)	51.50
Cetyl Dimethicone (Abil Wax 9801)	0.50
Talc	5.00
Aluminum Zirconium Tetrachlorohydrate-Gly	22.00
Fragrance	0.50

**Solid Stick Antiperspirant-B**

<u>Ingredients:</u>	<u>% w/w</u>
Lanette 18 DEO	15.00
Castorwax MP-80	4.00
Fluid AP	1.50
Cyclomethicone (Abil B 8839)	51.50
Stearoxy Dimethicone (Abil Wax 2434)	0.50
Talc	5.00
Aluminum Zirconium Tetrachlorohydrate-Gly	22.00
Fragrance	0.50

**Solid Stick Antiperspirant-C**

<u>Ingredient:</u>	<u>% w/w</u>
Lanette 18 DEO	15.00
Castorwax MP-80	4.00
Fluid AP	1.50
Cyclomethicone (Abil B 8839)	51.50
Cetyl Dimethicone (Abil B 9801)	0.25
Stearoxy Dimethicone (Abil Wax 2434)	0.25
Talc	5.00
Aluminum Zirconium Tetrachlorohydrate-Gly	22.00
Fragrance	0.50

**Procedure:**

1. Add the Cyclomethicone to a covered mixing tank equipped with a turbine propeller. Begin heating.
2. Add the Fluid AP, Lanette, Castorwax and Abil waxes. Bring temperature to 85-87°C. Hold 30 minutes at temperature while mixing.
3. Add the Talc. Do not allow the temperature to drop below 75°C during addition. Maintain temperature at 80-85°C while mixing for 10-15 minutes.
4. Add the Aluminum-Zirconium Complex. Do not allow the temperature to drop below 70°C during addition. Mix for 15-20 minutes at 175-180°C.
5. Cool while mixing to 60-62°C. Add fragrance.
6. Dispense to containers at 58-61°C.

**SOURCE:** Goldschmidt Chemical Corp.: Suggested Formulations

# **Section II**

## **Baby Products**

**Baby Bath**

<u>Part:</u>	<u>Ingredient:</u>		<u>Wt. %</u>
A	Deionized Water		50.0
	Lauramine Oxide	Mazox LDA	1.5
	Na4EDTA		0.2
	Methyl Paraben		0.2
	Sodium Cocoyl Isethionate	Jordapon CI Dispersion	11.0
B	Cocamidopropyl Hydroxysultaine	Mafo CSB-50	12.0
	Cocamidopropyl Betaine	Mafo CAB	5.7
	Deionized Water		19.3
	Fragrance		0.1
	Citric Acid		Q.S.

pH: 6.0-6.5

Viscosity: 9,800 cps

Appearance: Clear, straw-colored liquid

**Procedure:**

Mix Part A ingredients together and heat to 45C (110F). When uniform, add the Part B ingredients in the given order, cooling the batch. Adjust the pH.

Formulation F-102

**Baby Bath**

A clear, mild, quick-foaming system

<u>Ingredient:</u>		<u>Wt. %</u>
Deionized Water		63.63
Ammonium Lauryl Sulfate	Sipon L-22	16.50
Sodium C12-15 Pareth-15 Sulfonate	Avanel S-150	8.00
Sodium Cocoyl Isethionate	Jordapon CI Prill	2.40
PEG 150 Distearate	Mapeg 6000DS	1.00
Cocamidopropyl Hydroxysultaine	Mafo CSB-50	6.00
Cocamide DEA	Mazamide JT-128	2.00
Fragrance, Preservative		0.40
Citric Acid		0.07

pH: 6.0-6.5

Viscosity: 4600 cps

Appearance: Clear, very light straw-colored liquid

**Procedure:**

Blend the first five ingredients, heating to 65C (150F). When uniform, add the Mafo CSB and Mazamide JT-128, cooling to 45C (110F). Add the fragrance, preservative, and citric acid.

Formulation F-103

**SOURCE: PPG Industries, Inc.: Suggested Formulations**



**Baby Lotion**

The lotion is a smooth, creamy textured oil/water emulsion with a somewhat acidic pH.

<u>Ingredients:</u>	<u>% W/W</u>
1. Ritachol 1000	3.30
2. Ritalan C	1.00
3. Propylparaben	0.10
4. BHA	0.10
5. Mineral Oil (65/75 saybolt)	4.00
6. Ritachol	2.00
7. Sorbic Acid	0.10
8. Distilled Water	84.00
9. Acritamer 941	0.10
10. Triethanolamine (50%)	0.20
11. Propylene Glycol	5.00
12. Methylparaben	0.10
13. Color, Fragrance	QS

Weigh and add items 1 through 7 ("oil" phase) into a container and begin heating and stirring. Heat while stirring continuously, to 78-80C. Weigh and add item 8 into another container with stirring. Use a variable speed agitator equipped with a stirrer capable of imparting relatively high shearing stress (propeller type). Slowly sprinkle in item 9 and stir until the Acritamer 941 is completely dispersed and no lumps can be seen or felt. Add items 10, 11 and 12 and begin heating. Continue stirring and heat the water containing blend to 78-80C. When the "oil" phase and the water containing blend are both at 78-80C, add the water containing blend to the "oil" phase. Begin cooling, after completing the addition; cool to 40-43C and add the remaining ingredients. Cool to 25-30C and package fill into suitable containers.

**Baby Lotion**

<u>Ingredients:</u>	<u>% W/W</u>
<b>Part A:</b>	
1. Distilled Water	30.00
2. Pationic CSL	7.00
3. Patlac IL	1.00
4. Ritahydrox	0.50
5. Propylparaben	0.05
6. Ritalan	1.00
<b>Part B:</b>	
7. Distilled Water	53.60
8. Pationic 122A	2.50
9. Propylene Glycol	3.00
10. Patlac NAL	1.00
11. Methylparaben	0.10
12. Patlac LA (44% Solution)	0.25

Heat Part A and Part B to 165F. Add Part A to Part B with agitation. Maintain heat 10 minutes. Cool to room temperature. Adjust pH to 5.5-6.5 with Patlac LA (44% solution).

**Note:** It is recommended that the required amount of Patlac LA solution be determined in advance and incorporated into the batch as part of Phase B.

SOURCE: R.I.T.A. Corp.: Formulations H-89-A-2 & 103-122

**Baby Lotion Mousse with Panthenol, Vitamin E and Sunscreens**

<b><u>Ingredients:</u></b>	<b><u>% by Wt.</u></b>
Part I:	
Deionized Water	63.40
Glycerin, USP	5.00
Sequestrene Na2	0.20
Methyl Parasept	0.20
Part II:	
Ceraphyl 140-A	5.00
Cerasynt D	2.00
Parsol 1789	1.50
Parsol MCX	1.00
Emulsynt 1055	0.50
Stearic Acid	5.00
Mineral Oil	3.00
Vitamin E Acetate, USP-FCC (Code 60526)	0.50
Part III:	
Triethanolamine, 98%	1.50
Part IV:	
Aloe Vera Liquid 1:1	10.00
Part V:	
di-Panthenol, Cosmetic Grade (Code 63920)	1.00
Part IV:	
Perfume Oil	0.20

**Procedure:**

Heat Part I and Part II to 75C with mixing. Add Part I to Part II and mix thoroughly. Follow with addition of Part III and mix. Cool to 50C. Add Part IV and mix. Cool to room temperature until a smooth cream is obtained. Add Part V and mix. Add Part VI and mix. Fill and pressurize.

Aerosol Fill:	% by Wt.
Concentrate	93.00
Propellant A-46	7.00

**Components:**

Container: 2 oz. boxal, organosol lined  
 Valve: Precision  
 Stem: .018"  
 Body: .018" x .080"  
 Actuator: Foam Spout

**SOURCE:** Roche Chemical Division: Vitamins for Cosmetics:  
 Formula MU 502

Baby ProductsBaby Skin Lotion(514116)

Part A:	
Drakeol 7, Light Mineral Oil USP	35.00wt%
Penreco Snow, White Petrolatum USP	4.20
Sucrose stearate (and) sucrose distearate	3.00
Lanolin alcohol	1.25
Cetyl alcohol	0.25
Stearyl alcohol	0.25
Part B:	
Deionized water	54.80
Glycerin	1.00
Methylparaben	0.15
Propylparaben	0.15

In separate containers, heat Parts A and B to 75C. Add Part B to Part A slowly with stirring. Stir the mixture until it has cooled to room temperature. If desired, fragrance should be added at 45C.

Baby Cream(514125)

Part A:	
Penreco Mineral Jelly No. 15	25.00wt%
Drakeol 21, Mineral Oil USP	15.00
Glyceryl Stearate	10.00
Lanolin	5.00
White Beeswax	5.00
Preservatives	0.15
Part B:	
Deionized water	39.70
Preservatives	0.15

In separate containers, heat each part to 70C. Add Part B to Part A with stirring. With constant stirring, cool blend to room temperature. Fragrance may be added at 40C.

SOURCE: Penreco: Penreco Cosmetic Formulary

**Baby Oil**

Ritalan C and Patlac IL add lubricity and emollience to baby products. This baby oil formulation makes use of Ritalan C's inherent attributes to provide an oil gentle to the skin with excellent cleansing and lubricating properties. Patlac IL improves the emollience and makes the product less oily.

<u>Ingredients:</u>	<u>% W/W</u>
1. Mineral Oil	96.90
2. Ritalan C	1.00
3. Patlac IL	2.00
4. Fragrance	QS
5. Propylparaben	0.10

**Compounding Procedure:**

Weigh and add item 1 into a container and begin stirring. Add remaining ingredients and mix until a homogeneous dispersion occurs. Filter, if necessary, and package fill into suitable containers.

Formulation HB-89-L-4

**Baby Oil**

This preparation provides excellent emollience for the infant's tender skin, leaving the skin soft and smooth. Ritalan imparts lubricity, and Ritacetyl provides conditioning and moisturizing benefits.

<u>Ingredients:</u>	<u>% W/W</u>
1. Mineral Oil (65/75) saybolt	92.40
2. Ritalan	5.00
3. Ritacetyl	2.50
4. Propylparaben	0.10
5. Fragrance	QS

**Compounding Procedure:**

Weigh and add ingredients 1-4 into a container and begin stirring while warming, until all ingredients are liquid (approximately 55C). Stir until completely homogeneous and begin cooling. Stir continuously. At 43C add perfume. Continue stirring and cooling. Cool to 25C and allow to remain undisturbed for 24 hours. Filter.

Formulation HB-89-L-5

**SOURCE: R.I.T.A. Corp.: Suggested Formulations**

Baby Shampoo

	<u>%(w/w)</u>
Deionized Water	65.80
Sodium Laureth Sulfate (30%)	25.00
Lexaine CSB-50	6.00
PEG-150 Distearate	2.00
Polysorbate 20	1.00
Lexgard M	0.15
Lexgard P	0.05
Boric Acid (to desired pH)	q.s.

**Procedure:**

Blend ingredients together at 70C. Cool and fill.

**Observations:**

pH (direct): 7.0

viscosity: 725 cps

Formulation SP-87

Protein Baby Shampoo

	<u>%(w/w)</u>
Deionized Water	49.50
Sodium Laureth Sulfate (30%)	24.00
Maypon 4C	20.00
Lexaine CSB-50	5.80
PEG-150 Distearate (or q.s. to desired viscosity)	0.50
Lexgard M	0.15
Lexgard P	0.05
Citric Acid (to desired pH)	q.s.

**Procedure:**

Heat water to 70C. Add ingredients and blend until clear.

Adjust final pH and fill.

**Observations:**

pH (direct): 6.5

viscosity: 30 cps

Formulation SP-93

**SOURCE:** Inolex Chemical Co.: Suggested Formulations

**Baby Shampoo-Regular**

<u>Ingredients:</u>	<u>% w/w</u>
Water	53.2
Tetrasodium EDTA	0.1
Ammonium Laureth Sulfate (1M. E.O.) or Sodium Trideceth Sulfate	35.0
Cocamidopropyl Betaine (Tego Betaine L-7)	7.5
PEG-7 Glyceryl Cocoate (Tegosoft GC)	3.0
Dimethicone Copolyol (Abil B 88183)	0.2
Citric Acid	to pH 6.5
Color	Q.S.
Fragrance	Q.S.
Preservatives	Q.S.
PEG-18 Glyceryl Oleate/Cocoate (Antil 171)	1.0
Ammonium Chloride or Sodium Chloride	Q.S.

**Procedure:**

1. Dissolve the Tetrasodium EDTA in the water.
2. Add ingredients in order, mixing between additions. Avoid air entrapment.
3. Slowly mix in the PEG-18 Glyceryl Oleate/Cocoate.
4. Adjust viscosity with salt as needed.

**Baby Shampoo-Soft Conditioning**

<u>Ingredients:</u>	<u>% w/w</u>
Water	52.1
Tetrasodium EDTA	0.1
Ammonium Laureth Sulfate (1M. E.O.) or Sodium Trideceth Sulfate	35.0
Cocamidopropyl Betaine (Tego Betaine L-7)	8.0
PEG-7 Glyceryl Cocoate (Tegosoft GC)	3.0
Dimethicone Propyl PG-Betaine (Abil B 9950)	0.5
Citric Acid	to pH 6.5
Color	Q.S.
Fragrance	Q.S.
Preservatives	Q.S.
PEG-18 Glyceryl Oleate/Cocoate (Antil 171)	1.0
Ammonium Chloride or Sodium Chloride	Q.S.

**Procedure:**

1. Dissolve the Tetrasodium EDTA in the water.
2. Add ingredients in order, mixing between additions. Avoid air entrapment.
3. Slowly mix in the PEG-18 Glyceryl Oleate/Cocoate.
4. Adjust viscosity with salt as needed.

**SOURCE:** Goldschmidt Chemical Corp.: Suggested Formulations

Baby Shampoo

<u>Ingredients:</u>	<u>% w/w</u>
Water	60.9
Tetrasodium EDTA	0.1
Sodium Laureth Sulfate (2M. E.O.)	20.0
Cocamidopropyl Betaine (Tego Betaine L-7)	15.0
PEG-7 Glyceryl Cocoate (Tegosoft GC)	3.0
Citric Acid	to pH 6.5
Color	Q.S.
Preservatives	Q.S.
Fragrance	Q.S.
PEG-18 Glyceryl Oleate/Cocoate (Antil 171)	1.0
Sodium Chloride	Q.S.

Procedure:

1. Dissolve the Tetrasodium EDTA in the water.
2. Add ingredients in order, mixing between additions. Avoid air entrapment.
3. Slowly mix in the PEG-18 Glyceryl Oleate/Cocoate.
4. Adjust viscosity with salt as needed.

Diaper Cream  
(W/O Emulsion)

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Cetyl Dimethicone Copolyol (Abil EM-90)	2.0
Petrolatum	4.5
Dimethicone (Abil 500)	3.0
Cetyl Dimethicone (Abil Wax 9801)	1.5
Octyl Stearate (Tegosoft OS)	5.0
Mineral Oil	4.0
Polyglyceryl-4 Isostearate (Isolan GI-34)	0.5
Hydrogenated Castor Oil	0.8
Synthetic Wax	1.2
Phase B:	
Water	76.9
Sodium Chloride	0.6
Preservatives	Q.S.
Phase C:	
Fragrance	Q.S.

Procedure:

1. Add the components of Phase A. Heat while mixing to 80C to incorporate the waxes. Cool to 50C.
2. Heat Phase B to 50C. Add B to A slowly with a low energy mixer. Maintain a smooth milky appearance at all times.
3. Cool to 35C with sweep mixer. Add fragrance.
4. Homogenize.

SOURCE: Goldschmidt Chemical Corp.: Suggested Formulations

**Baby Skin Treatment Ointment**

This preparation for infants has good water resistance, excellent moisturizing and lubricating attributes. It applies smoothly and does not aggravate existing skin irritation. Ritaderm is included to impart lipids, as well as natural moisturizing factor properties that aid in protecting and moisturizing the baby's tender skin.

**Ingredients:**

	<b>% W/W</b>
1. Ritaderm	10.00
2. Imidazolidinyl Urea	0.10
3. Distilled Water	2.50
4. Petrolatum	72.15
5. Ozokerite	15.00
6. Allantoin	0.25

**Compounding Procedure:**

Weigh and add the distilled water into an auxiliary tank and begin heating and stirring. Heat to 70-73C and add the Allantoin and Imidazolidinyl Urea. Stir until these materials have completely dispersed. In a mixing tank weigh and add the remaining ingredients and begin heating and stirring. Heat to 78-80C while stirring continuously. When the blend containing the Ritaderm is at 78-80C, and the water-containing blend is at 70-73C, add the water-containing blend to the Ritaderm-containing blend. When all the water-containing blend has been added, begin cooling the batch. Cool to 45-50C, and package fill into suitable containers.

Formulation HB-89-L-6

**Pearlized Baby Wash Emulsion**

A gentle, viscous lotion cleanser with reduced defatting.

**Ingredients:**

	<b>% W/W</b>
1. Grilloten LSE 65K Soft	5.00
2. Distilled Water	50.80
3. Ritasynt IP	2.00
4. Sodium Laureth Sulfate	20.00
5. Sodium Laureth Sulfate (and) Disodium Laureth Sulfosuccinate	20.00
6. PEG 55 Propylene Glycol Oleate	1.00
7. Disodium EDTA	0.20
8. Sodium Chloride (25% solution)	1.00
9. Preservative, Perfume	QS

**Compounding Procedures:**

Combine ingredients 1, 2, 4, and 5 in a main mixing tank. Begin heating to 170F with agitation. At 170F, add Ritasynt IP. Mix until Ritasynt IP is melted and the batch is uniform. Add PEG 55 Propylene Glycol Oleate and EDTA. Maintain temperature. Mix until uniform. Begin cooling. Cool to 120F. Add perfume and preservative. Cool to 95F with mixing. Adjust viscosity with sodium chloride solution. Fill.

Formulation 110-130

**SOURCE: R.I.T.A. Corp.: Suggested Formulations**



Mild Baby Shampoo

<u>Ingredients:</u>	<u>% by Weight</u>
Stepan-Mild SL3	19.0
Steol CS-330	17.5
Amphosol CG	16.5
Kessco PEG 6000 Distearate	2.0
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Sodium chloride	Q.S.
D.I. Water	Q.S. to 100

Mixing Procedure:

Add the first three components to D.I. water with mixing and heat to 50-60C. Add PEG-6000 Distearate and mix until all solids have melted. Cool to 35C and adjust pH to 6.0-7.0 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with sodium chloride.

Physical Properties:

Clear, yellow liquid  
 Passed freeze/thaw and elevated heat study  
 pH (as is): 6.0-7.0  
Viscosity Profile:

0% sodium chloride: 55 cps  
 0.5% sodium chloride: 198 cps  
 1.0% sodium chloride: 1664 cps  
 2.0% sodium chloride: 16,600 cps

SOURCE: Stepan Co.: Formulation No. 145

Low Cost Baby Shampoo

<u>Ingredients:</u>	<u>% W/W</u>
Water	61.7
Tetrasodium EDTA	0.1
Sodium Laureth Sulfate (2M. E.O.)	25.0
Cocamidopropyl Betaine (Tego Betaine L-7)	12.0
Dimethicone Copolyol (Abil B 88183)	0.2
Color	Q.S.
Preservatives	Q.S.
Citric Acid	to pH 6.5
Fragrance	Q.S.
PEG-18 Glyceryl Oleate/Cocoate (Antil 171)	1.0
Sodium Chloride	Q.S.

Procedure:

1. Dissolve the Tetrasodium EDTA in the water.
2. Add ingredients in order, mixing between additions. Avoid air entrapment.
3. Slowly mix in the PEG-18 Glyceryl Oleate/Cocoate.
4. Adjust viscosity with salt as needed.

SOURCE: Goldschmidt Chemical Corp.: Suggested Formulation

**Skin Cream for Babies**

This oil/water emulsion type skin cream for infants rubs in quickly and leaves the baby's skin soft and smooth to the touch without a greasy, oily after-feel. Ritachol and Ritalan "C" impart these attributes, and the Ritachol also imparts emulsion stabilizing properties improving the shelf life of the product. Ritalan C imparts moisturization and emollient benefits. Ritachol 1000, a non-ionic emulsifier, serves as the primary means of assuring stability.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	58.90
2. Acritamer 941	0.10
3. Glycerin	5.00
4. Methylparaben	0.10
5. Ritachol 1000	12.50
6. Mineral Oil (65/75 saybolt)	18.00
7. Ritalan C	2.50
8. Ritachol	2.50
9. Propylparaben	0.10
10. Morpholine	0.10
11. Imidazolidinyl Urea	0.20
12. Fragrance	QS

**Compounding Procedure:**

Weigh and add the water into a container and begin stirring. Stir by means of a variable speed agitator equipped with a stirrer (propeller type) capable of imparting relatively high shear. Add items 2, 3, and 4. When all the Acritamer has been thoroughly dispersed and no lumps can be seen nor felt, add the Glycerin and Methylparaben. Add the remaining ingredients with the exception of the imidazolidinyl urea, morpholine and perfume into another container and begin heating and stirring. Heat the water-containing blend while stirring continuously to 70-73C. Heat the Ritachol 1000 blend while stirring continuously to 70-73C. When both blends are at 70-73C, add the water-containing blend to that containing the Ritachol 1000. When all the water-containing blend has been added, begin cooling. Cool to 25-30C and add items 10, 11 and 12 with mixing between additions. Mix 30 minutes after the last addition. Package fill into suitable containers.

**SOURCE:** R.I.T.A. Corp.; Formulation H-89-A-3

Skin Cream for Babies

This oil/water emulsion type skin cream for infants rubs in quickly and leaves the baby's skin soft and smooth without a greasy, oily after-feel. Ritachol and Ritalan C impart these attributes, and Ritachol also imparts emulsion stabilizing properties resulting in good shelf life for the product. Ritalan C imparts moisturizing as well as emollience.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	58.80
2. Acritamer 941	0.10
3. Glycerin	5.00
4. Methylparaben	0.10
5. Ritachol 1000	12.50
6. Mineral Oil (90 saybolt)	18.00
7. Ritalan C	2.50
8. Ritachol	2.50
8. Propylparaben	0.10
9. Triethanolamine (50%)	0.20
10. Imidazolinyl Urea	0.20
12. Fragrance	QS

Compounding Procedure:

Weigh and add the water into an auxiliary tank and begin stirring. Stir by means of a variable speed agitator (propeller type) capable of imparting relatively high shearing stress. Add items 2, 3, and 4. When all the Acritamer has been thoroughly dispersed and no lumps can be seen or felt, add the Glycerin and Methylparaben. Add the remaining ingredients with the exception of the Triethanolamine 50% and Perfume into the main mixing tank and begin heating and stirring. Heat the water phase while stirring continuously to 70-73C. Heat the Ritachol 1000 phase while stirring continuously to 70-73C. When both phases are at 70-73C, add the water phase to that containing the Ritachol 1000. When all the water phase has been added, begin cooling. Cool to 55-60C and add the Triethanolamine. Cool to 25-30C and add the Imidazolidinyl Urea and Perfume. Mix 30 minutes. Package fill into suitable containers.

SOURCE: R.I.T.A. Corp.: Formulation HB-89-L-7

# **Section III**

## **Bath and Shower Products**

**After Bath Freshener**

This clear gel freshener liquefies rapidly upon application, leaving the skin cool, refreshed and tingling. It removes residues such as dust, dirt, oil and makeup from facial areas either by itself or in conjunction with a cleansing lotion. This product is also beneficial when applied after bathing to the hands, legs and other body areas, helping to soften, smooth and condition the skin.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	70.19
2. Acritamer 941	0.15
3. Methylparaben	0.10
4. Propylene Glycol	5.00
5. Quaternium-15	0.10
6. SD Alcohol-40	23.00
7. Laneto 50	1.00
8. Color, Fragrance	QS
9. Triethanolamine (50%)	0.30
10. EDTA	0.08
11. Benzophenone-2	0.08

**Compounding Procedure:**

Weight item 1 into a container and start the mixer. A stirrer capable of imparting high shear is recommended. Add item 2 and stir until the Acritamer is thoroughly dispersed and hydrated (no visible lumps should be present). Add items 3-11. Stir until resultant Gel is clear and smooth.

Formulation H-89-A-4

**After Bath Splash**

An emollient, non-drying, after bath splash which refreshes while it moisturizes. Pationic ISL supplies excellent after-feel and perfume solubilization.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Alcohol SD 40	70.00
2. Patlac NAL	5.00
3. Patlac IL	3.00
4. Perfume	2.70
5. Pationic ISL	2.00
Part B:	
6. Distilled Water	17.30

**Compounding Procedure:**

Combine Part A and mix until clear. Slowly add Part B with agitation. Filter if desired.

Formulation 109-43

SOURCE: R.I.T.A. Corp.; Suggested Formulations

**Bath Gel**

This clear gel leaves a smooth conditioned feeling on the skin. Lexquat AMG-1S conditions the skin leaving it smooth, soft and satiny.

	<u>% (w/w)</u>
Deionized Water	50.50
TEA Lauryl Sulfate	30.00
Lexaine LM (Laureamidopropyl Betaine)	15.00
Lexquat AMG-1S (Isostearylamidopropyl Dihydroxypropyl Dimonium Chloride)	2.00
Glycerine	2.00
Lexgard M (Methylparaben)	0.20
Lexgard P (Propylparaben)	0.10
Fragrance	0.20
Citric Acid (pH=7.0+-0.2)	

**Procedure:**

Combine ingredients with mixing. Gentle heat may be used to facilitate mixing. Adjust pH.

**Observations:**

pH (direct): 6.9+-0.2  
Viscosity: 3,000 cps

Formulation BT-103

**Bath Gel**

Alpha olefin sulfonate (40%)	4.0
Lexate BPQ (Laureamidopropyl Betaine (and) TEA-COCO-Hydrolyzed Animal Protein (and) Oleamidopropyl Dihydroxypropyl Dimonium Chloride)	25.0
Glycerin	3.0
Deionized water	31.6
Lexgard M (Methylparaben)	0.3
Lexgard P (Propylparaben)	0.1
Citric acid	to pH 7.0+-0.2

**Procedure:**

Combine ingredients with mixing. Adjust pH.

SOURCE: Inolex Chemical Co.: Suggested Formulations

**Bath Gel**

This clear gel leaves a smooth conditioned feeling on the skin

	<u>% (w/w)</u>
Deionized water	50.50
TEA Lauryl Sulfate	30.00
Lexaine LM (Lauramidopropyl Betaine)	15.00
Lexquat AMG-IS (Isostearylamidopropyl Dihydroxypropyl Dimonium Chloride)	2.00
Glycerine	2.00
Lexgard M (Methylparaben)	0.20
Lexgard P (Propylparaben)	0.10
Fragrance	0.20
Citric Acid (pH=7.0+/-0.2)	

**Procedure:**

Combine ingredients with mixing. Gentle heat may be used to facilitate mixing. Adjust pH.

**Observation:**

pH (direct): 6.9+/-0.2

Viscosity: 3,000 cps

Formulation BT-103

**Bath Gel**

	<u>% (w/w)</u>
Sodium Lauryl Sulfate	30.00
Lexaine LM (Lauramidopropyl Betaine)	20.00
Lexquat AMG-O (Oleamidopropyl Dihydroxypropyl Dimonium Chloride)	5.00
Glycerine	2.00
Lexgard M (Methylparaben)	0.20
Lexgard P (Propylparaben)	0.10
Deionized Water	42.50
Citric Acid	qs to pH
Fragrance	0.20

**Procedure:**

Combine ingredients with mixing (gentle heat may be used to facilitate mixing). Adjust pH.

Adjusted pH (direct): 7.0+/-0.2

Formulation BT-100

**SOURCE:** Inolex Chemical Co.: Suggested Formulations

Bath Gel

<u>Ingredients:</u>	<u>% by Weight</u>
Steol CS-230	75.0
Amphosol CA	11.0
Ninol 55-LL	2.5
Polysorbate 20	1.0
Propylene Glycol	0.5
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
D.I. water	Q.S. to 100

**Mixing Procedure:**

Add first five components to D.I. water and mix until homogeneous. Adjust pH to 6.5-7.5 with citric acid. Add fragrance, dye and preservative, if desired.

**Physical Properties:**

Clear, yellow gel

pH (as is): 6.5-7.5

Viscosity: gel

Passed freeze thaw

Passed three weeks of heat stability at 50C.

Formulation No. 391

Mild Bubble Bath

<u>Ingredients:</u>	<u>% by Weight</u>
Bio-Terge AS-40	20.0
Alpha-Step MC-48	5.0
Ninol LMP	3.0
Tetrasodium EDTA	0.2
Citric acid	Q.S.
Sodium Chloride	Q.S.
D.I. water	Q.S. to 100

**Mixing Procedure:**

Heat water to 50-60C. Add first two components and EDTA, mixing well after each addition. Add LMP, mixing until clear. Cool to 25C. Adjust pH to 6.0-7.0 with Citric Acid. Add fragrance, dye and preservative as desired. Adjust to desired viscosity with Sodium Chloride.

**Typical Properties:**

Appearance: clear, liquid

Viscosity: 200 cps @ 1.5% sodium chloride

1100 cps @ 2.0% sodium chloride

**Comment:**

Stable for 3 weeks at 42C, 2 months at 25C, and through 3 freeze/thaw cycles.

Formulation No. 583

**SOURCE: Stepan Co.: Suggested Formulations**



Blooming Bath Oil

This bath oil will prevent dry skin. Added unique moisturizing and skin conditioning effect is due to the Pationic ISL. Patlac IL gives extra smoothness to the product. Both the Patlac IL and Pationic ISL make this product feel non-greasy. Does not leave a bathtub residue.

<u>Ingredients:</u>	<u>% W/W</u>
1. Mineral Oil (light)	+69.50
2. PEG-8 Laurate	16.00
3. Pationic ISL	7.00
4. Patlac IL	4.00
5. Ritoleth 2	2.50
6. Sorbitan Sesquioleate	1.00
7. Color, Fragrance, Preservative	QS

Compounding Procedure:

Combine ingredients and stir until clear. No heat needed.  
Formulation H-89-P-3

Blooming Bath Oil

This bath oil contains a high level of mineral oil but because of the use of Ritawax ALA, Patlac IL, and Pationic ISL, the product does not feel greasy. The Pationic ISL will give long lasting substantive moisturization and soft feel to the skin. This product will also reduce the winter drying of the skin.

<u>Ingredients:</u>	<u>% W/W</u>
1. Mineral Oil 70 (Carnation)	+76.00
2. Pationic ISL	5.00
3. Ritoleth 2	10.00
4. Ritawax ALA	5.00
5. Patlac IL	4.00
6. Color, Fragrance, Preservative	QS

Compounding Procedure:

Combine with mixing until clear. No heat needed.  
Formulation H-89-P-6

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Blooming Bath Oil

This bath oil is fast blooming with a non-greasy feel and an emollient after-feel. It leaves no residue. Leaves the skin silky smooth due to the Pationic ISL and Pationic CSL.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Mineral Oil	67.35
2. PEG 8 Monolaurate	16.00
3. Pationic ISL	9.50
4. Pationic CSL	4.00
5. Triethanolamine (99% Solution)	0.60
6. Propylparaben	0.05
Part B:	
7. Perfume	2.50

**Compounding Procedure:**

Heat Part A to 165F, mix. Cool to 120F. Add B, cool to room temperature.

Formulation 109-45

Floating Bath Oil

The Pationic ISL reduces the greasiness of the mineral oil and leaves a talc-like feel on the skin. The Pationic ISL is substantive to the skin and will help moisturize the skin. Ritawax ALA and Ritachol will add elegance to the finished product.

<u>Ingredients:</u>	<u>% W/W</u>
1. Mineral Oil	78.00
2. Ritachol	5.00
3. Pationic ISL	4.00
4. Ritawax ALA	5.00
5. Patlac IL	7.00
6. Fragrance	1.00

**Compounding Procedure:**

Prewrite chemicals and blend until clear.

Formulation 109-42

**SOURCE: R.I.T.A. Corp.: Suggested Formulations**

**Blooming Emollient Bath Oil**

This is a quick blooming bath oil that will accept a high fragrance loading. The Dimethicone Copolyol and PEG-25 Glyceryl Trioleate contribute substantially to the emolliency and are major factors in blooming effect.

<u>Ingredients:</u>	<u>% w/w</u>
Dimethicone Copolyol (Abil B 8852)	10.00
PEG-25 Glyceryl Trioleate (Tagat T0)	13.00
Avocado Oil	20.00
Mineral Oil	40.00
Caprylic/Capric Triglycerides (Tegosoft CT)	10.00
Isopropyl Myristate (Tegosoft M)	7.00

**Procedure:**

Add the ingredients in order. Mix well between additions.

**Low Foaming Bath Oil**

<u>Ingredients:</u>	<u>% w/w</u>
Cetearyl Octanoate (Tegosoft Liquid)	15.00
Caprylic/Capric Triglyceride (Tegosoft CT)	14.00
PEG-7 Glyceryl Cocoate (Tegosoft GC)	37.00
PEG-40 Hydrogenated Castor Oil (Tagat R-40)	12.00
Panthenol	0.20
Propylene Glycol	2.00
Dimethicone Copolyol (Abil B 8852)	0.50
Water	19-30
Fragrance	Q.S.
Preservatives	Q.S.
Color	Q.S.

**Procedure:**

Combine all ingredients - mix until homogeneous.

**SOURCE:** Goldschmidt Chemical Corp.: Suggested Formulations

Blooming Bath Oil with Shebu

A non-greasy blooming bath oil with Shebu brand shea butter as one of the emollients. Added unique moisturizing and skin conditioning effect is due to the Pationic ISL. Patlac IL gives extra smoothness to the product. Leaves skin conditioned without an oily feel. Eliminates oily residue in the tub.

<u>Ingredients:</u>	<u>% W/W</u>
1. Mineral Oil	70.00
2. PEG 8 Laurate	14.00
3. Shebu	2.00
4. Pationic ISL	6.50
5. Patlac IL	4.00
6. Ritoleth 5	2.50
7. Sorbitan Sesquioleate	1.00
8. Color, Fragrance and Preservatives	QS

Compounding Procedure:

Combine items 1 and 7 and heat to 50C. Mix until clear, cool to 40C and add remaining ingredients. Cool to 25C. Package.  
Formulation HB-89-S-10

Blooming Bath Oil

This bath oil will prevent dry skin. Added unique moisturizing and skin conditioning effect is due to the Pationic ISL. Patlac IL gives extra smoothness to the product. Both the Patlac IL and Patlac ISL make this product feel non-greasy. Does not leave a bathtub residue.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Mineral Oil	65.15
2. PEG 8 Monolaurate	16.00
3. Pationic ISL	9.50
4. Patlac IL	4.00
5. Pationic CSL	2.50
6. Triethanolamine (99%)	0.30
7. Propylparaben	0.05
Part B:	
8. Perfume	2.50

Compounding Procedure:

Heat Part A to 165F, mix. Cool to 120F. Add B, cool to room temperature.

Formulation 103-184

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Blooming Bath Oil

This clear formula blooms into a white cloud upon addition to the bath, and provides all-over moisturization. The Mazon EE-1 reduces the greasiness of the mineral oil to give a silky, nonoily feel. The formula is a water in oil microemulsion, which means that production and filling equipment need not be perfectly dry. The system will remain transparent even with the addition of incidental moisture.

<u>Ingredient:</u>		<u>Wt. %</u>
Deionized Water		1.0
Polysorbate 80		7.0
Sorbitan Laurate	S-Maz 80	7.0
Benzyl Laurate	Mazon EE-1	20.0
Fragrance		Q.S.
Mineral Oil	Drakeol 9	65.0
Appearance: Clear, vary pale yellow liquid		

Procedure:

Blend all ingredients except the mineral oil. When uniform, add the mineral oil with mixing. The batch will become clear at about the halfway point of the addition.

Formulation G-103

Mild Bath Foam

Water	58.4
Jordapon CI Dispersion	10.0
Sodium Lauryl Ether Sulfate 60%	15.0
Cocamidopropyl Hydroxysultaine	12.0
Cocamide DEA	3.0
Preservative, EDTA	0.6
Fragrance	1.0

Procedure:

Blend the water, Jordapon CI Dispersion, sodium lauryl ether sulfate, preservative, and EDTA, and heat to 45C. Add the Mafo CSB-50 and Mazamide 80, cooling the batch to 35C. Blend in the fragrance, and adjust the pH to 6.5-7.0 with citric acid.

Final Viscosity: 3,200 cps.

SOURCE: PPG Industries, Inc.: Suggested Formulations

**Body Shampoo**

<u>Ingredients:</u>	<u>% by Wt.</u>
Water, D.I.	23.27
Bio-Terge AS-40	15.54
Sodium chloride	0.66
Kessco EGMS	1.00
Ninol 50-LL	2.48
Sodium chloride	0.66
Steol CS-460	10.36
Water, D.I.	45.33
Formalin	0.20
Ammonium chloride	0.50

**Mixing Procedure:**

Blend ingredients in order given. Adjust pH with 50% citric acid before ammonium chloride addition. Ammonium chloride requirements may vary, add it carefully. Target viscosity is 1050 cps or above.

**Properties:**

Appearance: White, pearled liquid  
 pH, as is: 6.0-6.5  
 Viscosity @ 25C, cps: 1000-2000  
 Solids, %: 16.0-18.0  
 Density, lbs/gal: 8.46-8.59  
 Formalin: Positive

**Use Instructions:**

Can be used as is or perfumes and/or dyes may be added.

**Performance:**

Good foaming characteristics and foam stability.

SOURCE: Stepan Co.: Formulation No. 307

**Body Shampoo**

Jordapon CI Dispersion	16.0%
Sodium Lauryl Sulfate(1)	31.0
Cocamidopropyl Betaine(2)	7.0
Cocamide DEA(3)	6.0
Preservative, EDTA, Fragrance, Citric Acid	0.8
Water	39.2

- (1) Sipon LSB, Alcolac
- (2) Mafo CAB, PPG/Mazer
- (3) Mazamide 80, PPG/Mazer

**Procedure:**

Blend the water, Jordapon CI Dispersion, sodium lauryl sulfate, preservative, and EDTA, and heat to 45C. When uniform, add the Mafo CAB and Mazamide 80, cooling the batch to 35C. Add the fragrance, and adjust the pH with citric acid to 6.0-6.5. Final viscosity; 10,000 cps (with 0.5% NaCl).

SOURCE: PPG Chemicals, Inc: Formulation 7003-48

**Body Shampoo**

<u>Ingredient:</u>		<u>Wt. %</u>
Sodium Cocoyl Isethionate	Jordapon CI Dispersion	16.0
Sodium Lauryl Sulfate	Mazon SL-300	31.0
Cocamidopropyl Sulfate	Mafo CAB	7.0
Cocamide DEA	Mazamide JT-128	6.0
Preservative, EDTA, Fragrance,		
Citric Acid		1.0
Deionized Water		39.0

pH: 6.5-7.0

Viscosity: 6500-11,000 cps (with 0 to 0.6% NaCl)

Appearance: Clear, straw-colored liquid

Foaming: Flash: 14 sec.

Half-life: 6 min.

Density: 36.7 gm/liter

**Procedure:**

Blend all ingredients except fragrance, citric acid, and Cocamide DEA. Heat to 45C (115F) with mixing. When uniform, add remaining ingredients and allow to cool.

**Note:**

A pearlescent product will result if 0.75-1.5% Ethylene Glycol Monostearate or Ethylene Glycol Distearate (Mapeg EGMS, Mapeg EGDS) is added with the initial ingredients. Heat the batch to 60-65C (140-150F) to ensure complete dissolution of the pearl agent.

Formulation F-101

**Refreshing Body Splash**

<u>Ingredient:</u>		<u>Wt. %</u>
SD Alcohol 40B		25.0
PPG-9	Macol P-500	3.0
Dimethicone Copolyol	Masil 1066C	0.5
Fragrance		0.5
Deionized Water		71.0
Citric Acid		Q.S.

pH: 6.0-6.5

Appearance: Clear, water-white

Performance: A cooling, refreshing body splash which also provides light, non-oily moisturization

**Procedure:**

Blend the alcohol, Macol P-500, and Masil 1066C. Add the fragrance. When uniform, add the deionized water and adjust the pH with citric acid.

Formulation H-101

**SOURCE: PPG Industries, Inc.: Suggested Formulations**

**Bubble Bath Powder**

When added to the bath water, this formulation offers excellent foaming and cleansing attributes. Ritalan has been included to impart emolliency and lubricating properties...helps to keep the skin soft and smooth. This formulation has chelating qualities that help prevent so-called "hard water scum" from forming on the bath tub surface. Sodium Bicarbonate has been included because of its soothing qualities in various dermatological-related conditions. Sodium Bicarbonate also has deodorant properties.

<u>Ingredients:</u>	<u>% W/W</u>
1. Sodium Lauryl Sulfate (powder)	18.00
2. Sodium Bicarbonate	20.00
3. Sodium Sesquicarbonate	46.00
4. Methylparaben	0.20
5. Tetra Sodium EDTA	1.50
6. Ritalan	4.00
7. Quaternium-15	0.30
8. Sodium Lauryl Sulfoacetate	10.00
9. Fragrance	QS

**Compounding Procedure:**

Weigh and add all ingredients (except perfume) in order into a suitable blender equipped with an intensifier and mix until the powder is completely homogeneous. Add perfume using suitable atomizer device. Mix until uniform. Fill into suitable containers

Formulation HB-89-L-9

**Bubble Bath Powder**

This high-foaming bath product has a luxurious after-feel and long lasting foam. It is formulated without harsh ingredients.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Sodium Lauryl Sulfate (dry)	18.00
2. Sodium Bicarbonate	20.00
3. Sodium Sesquicarbonate	42.85
4. Sodium Lauryl Sulfoacetate	10.00
5. Pationic SSL	5.00
6. Propylparaben	0.15
Part B:	
7. Laneto AWS	3.00
8. Fragrance	1.00

**Compounding Procedure:**

Combine Part A in a blender and mix until uniform. Mix Part B in a suitable container until uniform. Slowly add Part B to Part A and mix after each addition. An atomizer or intensifier device is suggested for the addition of Part B.

Formulation 109-87

SOURCE: R.I.T.A. Corp.: Suggested Formulations



Deodorant Foaming Bath Oil

A bubbling product for the bath with Grillothen to reduce irritation and de-fatting and Grillocin HY-77 to combat odor.

Ingredients:

% W/W

1. Grillocin HY-77	2.00
2. Ritamid C	2.00
3. PEG-8	2.00
4. Sodium Laureth Sulfate	88.00
5. Trilaureth-4 Phosphate	4.50
6. Grillothen LSE 87 K	1.50
7. Perfume	QS
8. Preservative	QS

Compounding Procedure:

Weigh and add ingredient 4 into a container and begin stirring and heating. Heat to 70-73C and add all the ingredients with the exception of perfume and preservative. Be careful to avoid air entrapment while stirring the batch. Cool to 40-43C and add perfume and preservative. Continue cooling to 25-30C and package.

Formulation H-89-G-10

Foam Bath

A viscous bath foam product which moisturizes and leaves a good after feel. Grillothen is used to prevent drying. Pationic ISL and Panthenol are used for moisturization and after feel.

Ingredients:

% W/W

1. Grillothen LSE 87 Soft	4.00
2. Distilled Water	40.50
3. dl-Panthenol	1.00
4. Sodium Laureth Sulfate (2 Mole)	46.00
5. Pationic ISL	3.50
6. Euperlan PK 900	3.00
7. Sodium Chloride (25% solution)	+2.00
8. Preservative, Perfume	QS

Compounding Procedure:

Stir items 1 and 2 thoroughly. Add other ingredients through item 6 in given order, stirring after each addition. After addition of item 6, mix until uniform. Add perfume and preservative. Mix until uniform. Add salt solution to thicken.

Formulation HB-89-PA-20

SOURCE: R.I.T.A. Corp.: Suggested Formulations

**Emollient Foaming Bath Gel**

<b><u>Ingredients:</u></b>	<b><u>% w/w</u></b>
Phase A:	
Sodium Laureth Sulfate	40.0
Laureamidopropyl Betaine (Tego-Betaine L-90)	4.0
Cocamidopropyl Betaine (Tego-Betaine L-7)	4.0
PEG-7 Glyceryl Cocoate (Tegosoft GC)	3.0
Acrylates Stearate-50 Acrylate Copolymer (Antil 208)	0.8
Dimethicone Copolyol (Abil B 88183)	1.0
Phase B:	
Water	41.2
Preservative	Q.S.
Color	Q.S.
Citric Acid	to pH 6.0
Fragrance	Q.S.
Sodium Chloride	Q.S.

**Procedure:**

1. Combine the ingredients of Phase A in order, mixing well between additions. Make sure each ingredient is fully dispersed.
2. Add the water. Mix. Add preservatives, color and adjust pH.
3. Add Fragrance.
4. Adjust viscosity with the Sodium Chloride. Note: A 25% solution may be used for ease of mixing.

**European Style Bath Gel**

<b><u>Ingredients:</u></b>	<b><u>% w/w</u></b>
Water	54.9
Tetrasodium EDTA	0.1
Sodium Laureth Sulfate	25.0
Cocamidopropylamine Oxide (Tegamine Oxide WS-35)	8.0
Cocamidopropyl Betaine (Tego Betaine L-7)	9.0
Jobba Oil	0.2
PEG-20 Glyceryl Stearate (Tagat S2)	1.0
Citric Acid	to pH 6.0
Natural Extracts	0.5
Fragrance	Q.S.
Preservative	Q.S.
Color	Q.S.
PEG-18 Glyceryl Oleate/Cocoate (Antil 171)	1.3
Sodium Chloride (25% Solution)	Q.S.

**Procedure:**

1. Dissolve the Tetrasodium EDTA in the water.
2. Add ingredients in order, mixing between additions. Avoid air entrapment.
3. Slowly mix in the PEG-18 Glyceryl Oleate/Cocoate.
4. Adjust viscosity with the 25% solution of Sodium Chloride.

**Note:**

For a pearlized formula substitute the following for part of the water:

Cocamidopropyl Betaine (and) Glycol Distearate (and) Cocamide MEA (and) Cocamide DEA (TEGO Pearl B-48) 3.00%

**SOURCE:** Goldschmidt Chemical Corp.; **Suggested Formulations**

Enriched Bath/Shower Gel

<u>Ingredients:</u>	<u>% w/w</u>
Water	47.80
Tetrasodium EDTA	0.10
Ammonium Lauryl Sulfate	10.00
Ammonium Laureth Sulfate	30.00
PEG-7 Glyceryl Cocoate (Tegosoft GC)	3.30
Cocamidopropyl Betaine (Tego Betaine L-7)	5.00
Preservative	Q.S.
Color	Q.S.
Fragrance	Q.S.
Citric Acid (25% Solution)	to pH 6.0
PEG-18 Glyceryl Oleate/Cocoate (Antil 171)	3.80
Ammonium Chloride (25% Solution)	Q.S.

Procedure:

1. Dissolve the Tetrasodium EDTA in the water.
2. Add ingredients in order, mixing between additions. Avoid air entrapment.
3. Slowly mix in the PEG-18 Glyceryl Oleate/Cocoate.
4. Adjust viscosity with the 25% solution of Ammonium Chloride.

Note:

For a pearlized formula substitute the following for part of the water:

Cocamidopropyl Betaine (and) Glycol Distearate (and) Cocamide MEA (and) Cocamide DEA (Tego Pearl B-48) 3.00%

SOURCE: Goldschmidt Chemical Corp.: Suggested Formula

High Foaming Shower Gel

	<u>% Weight</u>
Sodium Laureth Sulfate (Standapol ES-3)	20.00
Trideceth-7 Carboxylic Acid (Incrodet TD-7C)	7.00
Cocamidopropyl Hydroxysultaine (Crosultaine C-50)	20.00
Polyol Alkoxy Ester (Crothix)	1.00
PEG-60 Almond Glycerides (Crovol A-70)	2.00
BHT	0.10
Disodium EDTA	0.10
Perfume	0.50
Germaben II	1.00
Water	48.30

Procedure:

Combine the Standapol ES-3, Incrodet TD-7C, Crosultaine C-50, Disodium EDTA, Germaben II and water with mixing. Combine the Crothix, Crovol A-70 and BHT with mixing and heat to 65-70C. Continue mixing the Crothix premix and cool to 50C. Add the perfume to the Crothix phase and mix until uniform. When clear, add Crothix phase to the surfactant phase with mixing. Adjust pH to 6.0-6.5 with NaOH solution.

SOURCE: Sutton Laboratories: Suggested Formulation

Liquid Bubble Bath

<u>Ingredients:</u>	<u>% by Weight</u>
Steol CS-330	10.0
Bio-Terge AS-40	5.0
Ninol 30-LL	2.0
Ninol 55-LL	2.0
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Sodium chloride	Q.S.
D.I. water	Q.S. to 100

Mixing Procedure:

Add first four components to D.I. water and mix until clear. Adjust pH to 6.0-7.0 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with sodium chloride.

Physical Properties:

Yellow, clear liquid

pH (as is): 6.0-7.0

Passed freeze thaw study

Stable for two weeks at 50C & six months at room temp.

Viscosity Profile: as is: 5 cps

1.0% sodium chloride: 2,210 cps

2.0% sodium chloride: 2,600 cps

3.0% sodium chloride: 5,800 cps

SOURCE: Stepan Co.: Formulation No. 480

Bubble Bath

This is an elegant bubble bath giving long-lasting bubbles. This clear bubble bath cleanses with good foaming and skin conditioning and leaves an excellent afterfeel.

	<u>% (w/w)</u>
Deionized water	49.50
Biaterge AS-40 (Sodium C14-16 Olefin Sulfonate)	20.00
Sodium Laureth Sulfate	15.00
Lexaine LM (Lauramidopropyl Betaine)	15.00
Lexquat AMG-IS (Isostearylamidopropyl Dihydroxypropyl Dimonium Chloride)	5.00
Lexgard M (Methylparaben)	0.20
Fragrance	0.30

Procedure:

Combine ingredients with mixing.

Observation:

pH (direct): 7.0+-0.2

SOURCE: Inolex Chemical Co.: Formulation BT-102

Liquid Bubble Bath

A high foaming, moderate cost bubble bath which is non-drying and will leave the skin soft and silky. This formula does not contain harsh detergents.

Ingredients:

	% W/W
1. Distilled Water	+48.00
2. Sodium C14-16 Olefin Sulfonate	40.00
3. Pationic ISL	3.00
4. Lauramide DEA	5.00
5. Laneto 50	4.00
6. Fragrance, Color, Preservatives	QS
7. Patlac LA (44%)	QS

Compounding Procedure:

Add perfume to the Lauramide DEA. Add Pationic ISL to the pre-mix. Mix until uniform. Combine water and sodium olefin sulfonate. Add lauramide pre-mix to water-olefin sulfonate mix. Mix until uniform. Add Laneto 50. Mix until uniform. Adjust pH to 6.5-8.0 as desired with Patlac LA.

SOURCE: R.I.T.A. Corp.: Formulation H-89-P-4

Shower Gel with Emollient

A crystal-clear, viscous formula which flash foams into rich, soft bubbles.

Part:	Ingredient:		Wt. %
A	Deionized Water		57.5
	Tetrasodium EDTA		0.2
	Imidazolidinyl Urea	Germall 115	0.2
	Methyl Paraben		0.2
	Ammonium Laureth Sulfate, 60%	Alfonic 1412-A	22.5
B	Cocamidopropyl Hydroxysultaine	Mafo CSB-50	17.0
	Benzyl Laurate	Mazon EE-1	0.5
	Fragrance		0.7
	Cocamide DEA	Mazamide JT-128	1.0
C	Citric Acid, 10%		0.2

pH: 5.5-6.0

Viscosity: 16,000-18,000 cps

Appearance: Clear, pale yellow viscous liquid

Procedure:

Blend the Part A ingredients at 40-45C until dissolved. Discontinue heating, and add the part B ingredients in order, mixing until dissolved. Add the Mazamide JT-128 and adjust the pH.

SOURCE: PPG Industries, Inc.: Formulation F-106

**Moisturizing Bath Foam**

<u>Ingredient:</u>		<u>Wt. %</u>
Deionized Water		54.7
Cocamidopropyl Hydroxysultaine	Mafo CSB-50	12.0
Sodium Lauryl Ether Sulfate	Mazon ES-60	20.0
Sodium Cocoyl Isethionate	Jordapon CI Dispersion	8.0
PEG 7 Glyceryl Cocoate	Mazol 159	1.0
Methyl Paraben		0.2
EDTA		0.2
Cocamide DEA	Mazamide JT-128	1.5
Cocamide MEA	Mazamide CMEA	1.5
Fragrance		0.7
Citric Acid		0.2

pH: 6.0-6.5

Viscosity: 4,000 cps

Appearance: Clear, straw-colored liquid

**Procedure:**

Blend the first seven ingredients and heat to 50C (120F). Add the Mazamide 80 and CMEA. Cool to 40C (105F) and add fragrance. Adjust pH with citric acid.

Formulation E-101

**Floating Bath Oil**

<u>Ingredient:</u>		<u>Wt. %</u>
Isopropyl Palmitate	Propal	39.0
Oleth-2	Macol OA-2	1.0
Capric/Caprylic Triglyceride	Mazol 1400	15.0
Fragrance		1.0
Mineral Oil	Drakeol 9	44.0

Appearance: Clear, water-white oil

Performance: Spreads spontaneously on warm (105F) water.

Leaves a light, non-greasy, non-tacky film on the skin

**Procedure:**

Blend all ingredients except the mineral oil. When uniform, add the mineral oil.

Formulation G-101

**SOURCE: PPG Industries, Inc.: Suggested Formulations**

Pearlized Head to Toe Cleanser

	<u>% (w/w)</u>
Deionized Water	45.20
Ammonium Lauryl Sulfate	42.00
Lexaine IS	12.00
Lexemul EGDS	0.50
Lexgard M	0.20
Lexgard P	0.10
Dye	q.s.
Fragrance	q.s.

**Procedure:**

Charge water and ammonium lauryl sulfate into vessel and heat to 70C with mixing. Add all ingredients except dye and fragrance and agitate until dissolved. Adjust pH. Cool batch to 40C and add dye and fragrance. Fill at 35C.

Pearl will develop on standing.

**Observations:**

adjusted pH (direct): 6.9 with citric acid

viscosity: 5,000 cps

Formulation SP-109

After-Bath Splash

This product is hydroalcoholic after-bath freshener and skin conditioner which leaves a smooth, silky afterfeel on the skin.

	<u>% (w/w)</u>
Deionized water	1.00
SDA-40B Alcohol	81.00
Glycerine	3.00
Lexol PG-900	7.00
Lexquat AMG-IS	5.00
Fragrance	3.00

**Procedure:**

Combine ingredients with mixing.

**Observation:**

pH (direct): 7.0+-0.2

Formulation BT-104

SOURCE: Inolex Chemical Co.: Suggested Formulations

Premium Bubble Bath

<u>Ingredients:</u>	<u>% by Weight</u>
Steol CS-330	45.0
Ninol 55-LL	5.0
Amphosol CA	5.0
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Sodium chloride	Q.S.
D.I. water	Q.S. to 100

Mixing Procedure:

Add Steol CS-330, Ninol 55-L, and Amphosol CA to D.I. water with mixing until homogeneous. Adjust pH to 6.0-6.5 with citric acid. Add fragrance, dye and preservative, if desired.

Physical Properties:

Yellow, clear liquid

pH (as is): 6.0-6.5

Freeze thaw stable

Stable for two weeks at 50C

Viscosity Profile: as is: 200 cps

0.5% sodium chloride: 2,400 cps

1.0% sodium chloride: 9,100 cps

2.0% sodium chloride: 20,700 cps

SOURCE: Stepan Co.: Formulation No. 341

Silky Bubble Bath

This clear, viscous liquid develops high, stable foam even in hard water.

<u>Part:</u>	<u>Ingredient:</u>	<u>Wt. %</u>
A	Demineralized Water	55.6
	Na4EDTA	0.2
	Imidazolidinyl Urea	0.2
	Ammonium Cocoyl Isethionate	11.7
	Methyl Paraben	0.2
B	Ammonium Laureth Sulfate	25.8
	Cocamide DEA	3.0
	Cocamide MEA	1.0
	Fragrance	1.0
C	Citric Acid	0.1
	Ammonium Chloride	1.2

pH: 6.5-7.0

Viscosity: 4500-5000 cps

Appearance: Clear, straw-colored liquid

Procedure:

Mix the part A ingredients in the main vessel. In a separate vessel premix part B, warming to 40C to dissolve the Mazamide CMEA. Add B to A, mixing until clear and uniform. Adjust pH and viscosity.

SOURCE: PPG Industries, Inc.: Formulation E-102



Shower Bath "A"

A viscous shower product without gums. Does not dry the skin and leaves a smooth feel.

<u>Ingredients:</u>	<u>% W/W</u>
1. Grilloten LSE 87	2.50
2. Grilloten LSE 87K	0.50
3. Glycol Distearate	0.50
4. Pationic 138C	2.50
5. PEG-55 Propylene Glycol Oleate	1.00
6. Distilled Water	35.30
7. Sodium Laureth Sulfate	51.00
8. Potassium Coco-Hydrolyzed Animal Protein	6.50
9. Citric Acid (25% Solution)	0.20

Compounding Procedure:

Combine ingredients 1,2,4,6,7, and 8. Mix and begin heating to 160F. Combine ingredients 3 and 5. Heat to 160F and add to batch. Cool to 95F. Adjust pH to 6.0 to 6.5 with Citric Acid solution. Package.

Formulation H-89-G-13

Shower Bath "B"

A viscous shower cleanser. Contains no gums. Cleans without stripping and leaves a smooth feel.

<u>Ingredients:</u>	<u>% W/W</u>
1. Grilloten LSE 65K	2.00
2. Pationic 138C	1.80
3. Distilled Water	10.00
4. Sodium Laureth Sulfate	45.00
5. Cocamidopropyl Betaine	8.00
6. Distilled Water	31.20
7. Sodium Chloride (25% Solution)	2.00

Compounding Procedure:

Combine ingredients 1,2 and 3. Mix until uniform (gentle warming will facilitate solution). Combine ingredients 4,5 and 6. Mix until uniform. Add Grilloten premix (ingredients 1,2 and 3) to Lauryl Ether Sulfate premix. Mix until uniform. Adjust viscosity with Sodium Chloride solution.

Formulation H-89-G-14

SOURCE: R.I.T.A. Corp.: Suggested Formulations

**Shower Bath "C"**

A viscous shower bath cleanser without gums. Leaves a smooth feel. Grillotens assist in the prevention of irritation.

<u>Ingredients:</u>	<u>% W/W</u>
1. Grilloten LSE 87	2.00
2. Grilloten LSE 87K	2.00
3. PEG-55 Propylene Glycol Oleate	2.00
4. Distilled Water	10.00
5. Sodium Laureth Sulfate	57.96
6. Distilled Water	25.84
7. Citric Acid (25% Solution)	0.20

**Compounding Procedure:**

Combine ingredients 1,2,3, and 4 and mix until uniform. Combine ingredients 5 and 6. Mix until uniform. Add ingredients 1,2,3 and 4; premix to Ether Sulfate premix. Mix until uniform. Add Citric Acid as 25% solution to adjust pH (6.0 to 6.5 is recommended).

Formulation H-89-G-15

**Shower Bath**

A viscous shower product which leaves a smooth feel and does not dry the skin.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Grilloten LSE 87 Soft	2.00
2. Grilloten LSE 87K Soft	2.00
3. Distilled Water	10.00
Part B:	
4. Sodium Laureth Sulfate-40 Mole	44.00
5. Cocamphoglycinate	8.00
6. PEG-55 Propylene Glycol Oleate	1.50
7. Ritasynt IP	3.00
8. Citric Acid (25% Solution)	0.20
9. Distilled Water	29.30
Part C:	
10. Perfume, Preservative	QS

**Compounding Procedure:**

Combine ingredients in Part A. Mix and begin heating. Heat to 175F. Combine ingredients in Part B (except Citric Acid). Mix and begin heating. Heat to 175F. Add Part A to Part B while mixing. Begin cooling. Cool to 120F. Add perfume and preservative. Cool to 95F. Add Citric Acid solution to adjust pH to 5.5 to 6.0.

Formulation H-89-G-16

**SOURCE: R.I.T.A. Corp.: Suggested Formulations**

Shower Gel

<u>Ingredients:</u>	<u>% by Weight</u>
Bio-Terge AS-40	41.0
Steol CS-460	27.3
Ninol 40-CO	13.0
Ninol 96-SL	6.5
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Sodium chloride	Q.S.
D.I. water	Q.S. to 100

Mixing Procedure:

Add first four components to D.I. Water and heat to 40-50C with mixing until clear. Cool to 30C and adjust pH to 6.0-7.0 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with sodium chloride.

Thick, yellow gel

Viscosity is greater than 100,000 cps

pH (as is): 6.0-7.0

Passed freeze thaw and elevated temperature study.

Formulation No. 416

Shower Gel

<u>Ingredients:</u>	<u>% by Weight</u>
Stepanol AM-V	42.0
Amphosol CA	12.0
Fragrance, dye, preservative	Q.S.
Ammonium chloride	Q.S.
D.I. Water	Q.S. to 100

Mixing Procedure:

Add Stepanol AM-V and Amphosol CA to D.I. Water and heat to 45C. Blend until clear and homogeneous. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with ammonium chloride.

Typical Properties:

Light yellow gel

Viscosity: 180,000 cps

Passed freeze thaw and elevated temperature study

Comment:

Well suited to tube packaging for use as a body cleanser

Formulation No. 435

SOURCE: Stepan Co.: Suggested Formulations

Shower Gel

<u>Ingredients:</u>	<u>% by Weight</u>
Stepanol AM-V	40.0
Ninol 30-LL	3.0
Ammonyx SO	2.0
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Ammonium chloride	Q.S.
D.I. Water	Q.S. to 100

Mixing Procedure:

Add first three components to D.I. water and mix until clear. Adjust pH to 6.0-7.0 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with ammonium chloride.

Physical Properties:

Clear yellow gel

Passed three freeze-thaw cycles

Passed two weeks at 50C

pH (as is): 6.0-7.0

Viscosity: 0.5% sodium chloride: 32,850 cps

1.0% sodium chloride: 35,000 cps

Formulation No. 481

Shower Soap

<u>Ingredients:</u>	<u>% by Weight</u>
Bio-Terge AS-40	30.00
Stepanol AM	20.00
Ninol 40-CO	4.00
Kessco EGDS	0.75
Polyquaternium-7	0.50
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Sodium chloride	Q.S.
D.I. water	Q.S. to 100

Mixing Procedure:

Combine the first five components in D.I. water and heat to 70C. Mix until all of the EGDS is completely dispersed. Cool to 35C with mixing. Adjust pH to 6.0-7.0 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with sodium chloride.

Physical Properties:

Light yellow pearly liquid

pH (as is): 6.0-7.0

Viscosity Profile: as is: 50 cps

0.5% sodium chloride: 180 cps

1.0% sodium chloride: 840 cps

2.0% sodium chloride: 7050 cps

Formulation is heat stable, but does not reconstitute after freezing.

Formulation No. 414

SOURCE: Stepan Co.: Suggested Formulations

**Silky Bubble Bath**

Phase A:	<u>% Weight</u>
Disodium Oleamido MEA-Sulfosuccinate (Incrocul OMS)	35.00
Cocamidopropylamine Oxide (Incroline Oxide C)	3.50
Lauramide DEA (Incroline LR)	2.00
PEG-45 Palm Kernel Glycerides (Crovol PK-70)	5.00
Germaben II	1.00
Sodium Chloride	1.25
Water	48.75

Phase B:	
Sodium Laureth Sulphate (and) Hydroxyethyl Stearamide-MIPA (Crodapearl Liquid)	3.00
Silk Amino Acids (Crosilk Liquid)	0.50

**Procedure:**

Combine Phase A ingredients with slight heating to 65C. When clear, stop heating, continue mixing and cool to 45C. At 45C add Phase B. Continue cooling to room temperature and adjust the pH with citric acid to 6.0.

**SOURCE:** Sutton Laboratories: Suggested Formulation

**Bubble Bath**

	<u>% by Weight</u>
Monamate LA-100	15.0%
Sodium Lauryl Sulfate (28%)	35.0%
Monamid 1089	5.0%
Water	45.0%
Adjust pH to 6.0	

Mix with heat until clear. Cool. Adjust pH.

**Low Cost Bubble Bath**

	<u>% by Weight</u>
Water and Preservative	69.5
Sodium Chloride	0.5
Monamine 779	15.0
Sulframin AOS C14-16	15.0

**Procedure:**

Add ingredients in order listed and mix until dissolved. Warming of water will shorten mixing time. Adjust pH to level desired. At pH 7.0 viscosity is approximately 700 cps.

**SOURCE:** Mona Industries, Inc.: Suggested Formulations

**Skin Conditioning Bath Gelee**

This bath gelee provides the smooth unique feel and moisturizing effect of the substantive ingredient, Pationic ISL, not the oil stripped effect from regular bath geleees. Ritawax 15 is used as a skin conditioner. The product functions well as a body scrub or a bubble bath.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Sodium Laureth Sulfate (2 Mole)	53.00
2. Distilled Water	33.15
3. Ritamid C	4.00
4. Ritawax 15	3.00
5. Pationic ISL	3.00
6. Ritapeg 150 DS	0.50
7. Methylparaben	0.15
Part B:	
8. Fragrance	1.00
9. Kathon CG	0.50
10. Sodium Chloride (25% Solution)	1.00
11. Patlac LA (44%)	0.70

**Compounding Procedure:**

Heat Part A to 165F with agitation. Cool to 120F with mixing and add fragrance and Kathon CG. Cool to room temperature. Adjust pH to 6.0-6.5 using Patlac LA. Adjust to desired viscosity with Sodium Chloride.

Formulation 109-44

**Skin Conditioner Bath Gelee**

This bath gelee provides the smooth unique feel and moisturizing effect of Pationic ISL, not the oil stripped effect from regular bath geleees. Ritawax 15 is used as a skin conditioner. The product functions well as a body scrub or a bubble bath.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Sodium Laureth Sulfate (2 Mole)	53.00
2. Distilled Water	21.62
3. Ritamid C	4.00
4. Ritawax 15	3.00
5. Pationic ISL	3.00
6. Ritapeg 150 DS	0.50
7. Methylparaben	0.15
8. Laneto 100	2.00
9. Ritaloe 1X	10.00
Part B:	
11. Fragrance	1.00
12. Kathon CG	0.03
13. Sodium Chloride (25% Solution)	1.00
14. Patlac LA (44%)	0.70

**Compounding Procedures:**

Heat Part A to 165F with agitation. Mix until uniform. Cool to 120F with mixing and add fragrance and Kathon CG. Cool to room temperature. Adjust pH to 6.0- 6.5 using Patlac LA. Adjust to desired viscosity with Sodium Chloride.

Formulation 112-54

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Skin Softening Bath Oil

<u>Ingredients:</u>	<u>% by Weight</u>
PPG-14 Butyl Ether	74.50
Neobee M-5	23.50
PPG-20 Methyl glucose ether	1.65
Propyl paraben	0.24
Vitamin E	0.06
Almond oil extract	0.05

To a suitable mixing vessel add PPG-14 Butyl Ether. Heat to 55C and add the remaining ingredients, minus the fragrance. Cool to 40C. Add fragrance.

Typical Properties:

Appearance: Clear liquid  
 Viscosity: 25 cps @ 25C  
 Freeze thaw stable  
 Stable at 50C for two weeks

Formulation No. 600

Soothing Bath Oil

<u>Ingredients:</u>	<u>% by Weight</u>
PPG-14 Butyl ether	71.50
Neobee M-5	21.50
Safflower oil	6.67
Propyl paraben	0.25
Butyl hydroxy toluene	0.075
Avocado oil extract	0.05
Fragrance	Q.S.

To a suitable mixing vessel add PPG-14 Butyl Ether. Heat to 55C and add the remaining ingredients, minus the fragrance. Cool to 40C. Add fragrance. Cool to 25C.

Typical Properties:

Appearance: Clear liquid  
 Viscosity: 25 cps @ 25C  
 Freeze/thaw stable  
 Stable for two weeks at 50C

Formulation No. 601

SOURCE: Stepan Co.: Suggested Formulations

Skin Treatment Bath Oil

This spreading bath oil, when added to bath water, imparts excellent skin lubricating and emollient qualities, and does not deposit a residual ring on the tub surface. Ritalan C has been added for skin moisturizing and conditioning effects. Ritachol has been incorporated to improve the spreading properties of this bath oil, as well as impart moisturizing benefits.

<u>Ingredients:</u>	<u>% W/W</u>
1. Mineral Oil	69.80
2. PEG-8 Dilaurate	6.50
3. Cottonseed Oil	3.50
4. Wheat Germ Oil	5.00
5. Ritalan C	5.00
6. Ritachol	10.00
7. Propylparaben	0.10
8. BHA	0.10
9. Fragrance	QS

Compounding Procedure:

Weigh item 2 into a container and begin heating and stirring. Add the Propylparaben and BHA into ingredient 2 and continue heating and stirring to about 55C. Mix until both have dissolved. Add the remaining ingredients in order and stir until homogeneous. Cool to 25-30C.

SOURCE: R.I.T.A. Corp.; Formulation HB-89-L-2

Spreading Bath Oil with Vitamin E

<u>Ingredients:</u>	<u>% by Wt.</u>
Part I:	
Klearol Mineral Oil	16.93
Lantrol	5.00
Delytl Extra	40.00
Delytl Prime	20.00
Vitamin E Acetate, USP-FCC (Code 60526)	2.00
Ascorbyl Palmitate (Code 60412)	0.02
Vitamin E, USP-FCC (Code 60524)	0.05
Part II:	
Lipopeg 200 DL	13.00
Perfume Oil	3.00

Procedure:

Mix ingredients in Part I. The order of addition is given above. Add premixed Part II to Part I and mix until uniform. To insure clarity, allow to age at least 48 hours and filter with an absorbent filter aid.

SOURCE: Roche Chemical Division; Formulation SC 413



# **Section IV**

## **Beauty Aids**

Active Cleanser

A gentle cleanser for the removal of grayish skin cells for both face and body.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Sodium Laureth Sulfate ES-3	53.00
2. Distilled Water	28.70
3. Ritamide C	4.00
4. Pationic ISL	3.00
5. Ritapeg 150 DS	0.50
6. Sodium Chloride	0.10
Part B:	
7. Polyethylene Beads 8A	10.00
Part C:	
8. Patlac LA (44%)	+0.10
9. Glydant 40-700	0.20
10. Perfume	0.30
11. Color (D&C Brown #1 Repl)	0.10

Compounding Procedure:

Heat Part A to 150F. Agitate and add Part B. Mix and cool to 120F, add Part C. Cool to room temperature. Adjust pH with Patlac LA to 6.0.

Formulation 103-177

Cleanser

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Sodium Laureth Sulfate ES-3	53.00
2. Distilled Water	38.80
3. Ritamid C	4.00
4. Pationic ISL	3.00
5. Ritapeg 150 DS	0.50
6. Sodium Chloride	0.10
Part B:	
7. Patlac LA (44%)	+0.10
8. Glydant (40-700)	0.20
9. Perfume	0.20
10. Color (D&C Brown #1)	0.10

Compounding Procedure:

Heat Part A to 65C with agitation. Mix and cool to 40C. Add Part B. Mix and cool to room temperature. Adjust pH to 6.0 with Patlac LA.

Specifications:

Viscosity after 24 hours: 8,000-10,000 cps.\*

\* The viscosity will equilibrate to approximately 18,000 cps within 2 or 3 weeks

Formulation 103-175

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Alcoholic Splash Toner

<u>Ingredients:</u>	<u>Percent by Weight</u>
Deionized water	71.60
Isopropyl alcohol	20.00
Propylene glycol	2.00
Methylparaben	0.15
Ginseng extract	2.00
Horse chestnut extract	2.00
Methocel 40-202	0.20
Sodium PCA	1.00
Procetyl AWS	0.10
Dowicil 200 preservative	0.05
Polysorbate 20	1.00
Perfume oil (floral)	0.10
D&C red 40	q.s.

Procedure:

1. Add deionized water and alcohol to a vessel and begin mixing.
2. Dissolve methylparaben in warm propylene glycol--add to batch.
3. Add remaining ingredients one at a time mixing well between each addition.
4. Add perfume oil to the Polysorbate 20 and warm while mixing to dissolve perfume--add to batch.
5. Add color and mix well.

Some ideas you can try:

1. Consider substituting other natural herbal ingredients for the Ginseng extract or the Horse chestnut extract.
2. To reduce the alcohol odor, substitute ethyl alcohol for the isopropyl alcohol.

Non-Alcoholic Splash Toner

<u>Ingredients:</u>	<u>Percent by Weight</u>
Deionized water	91.35
Propylene glycol	2.00
Methylparaben	0.15
Ginseng extract	2.00
Horse chestnut extract	2.00
Methocel 40-202	0.20
NaPCA	1.00
Procetyl AWS	0.10
Dowicil 200 preservative	0.10
Polysorbate 20	1.00
Perfume oil (floral)	0.10

Procedure:

1. Meter deionized water into a mixing vessel.
2. Dissolve methylparaben in warm propylene glycol--add to batch.
3. Add remaining ingredients one at a time mixing well between each addition.
4. Add perfume oil to Polysorbate 20 and warm while mixing to dissolve perfume--add to batch.

Some ideas you can try:

1. Try replacing the Ginseng extract or Horse chestnut extract with other herbal extracts.
2. Consider expanding the marketing potential of this product by including an ingredient for those sensitive skin, such as aloe vera gel.

SOURCE: Dow Chemical Co.: Suggested Formulations

**Aqua Gel**

Phase A:	<u>% Weight</u>
Water	92.68
Allantoin	0.20
Trisodium EDTA	0.10
Carbomer-940 (Carbopol 940)	0.40
Germaben II	0.60
Triethanolamine, 99%	0.75
Phase B:	
PEG-60 Almond Glycerides (Crovol A-70)	1.00
Retinyl Palmitate (Vitamin A Palmitate)	0.10
Dow Corning 190 Surfactant	0.40
Glycereth-26	0.60
Cholesterol (Cholesterol NF)	0.10
Phase C:	
Acetamide MEA (and) Lactamide MEA (Incromectant LAMEA)	2.00
Hydrolyzed Animal Protein (and) Hyaluronic Acid (Cromoist HYA)	1.00
D&C Violet #2, 0.2% Solution	0.03
D&C Green #5, 1.0% Solution in 20% ETOH, 80% Water	0.04

**Procedure:**

Charge vessel with water, Allantoin and EDTA and start mixing. Sprinkle in Carbopol 940 with good agitation. Mix until Carbopol 940 is completely dispersed. Heat to 60C and add Germaben II followed by triethanolamine. Premix and heat Phase B ingredients to 60C. Add Phase B to the batch with mixing. Cool batch to 40C and add Phase C ingredients in given order. Cool to room temperature with mixing.

**Velvety Dusting Powder**

Phase A:	<u>% Weight</u>
Talc (Talc 5251)	77.40
Aluminum Starch Octenyl Succinate (Dry Flo)	20.00
Zinc Stearate	2.00
Methylparaben	0.10
Propylparaben	0.10
Germall II	0.20
Phase B:	
Fragrance	0.20

**Procedure:**

Combine Phase A ingredients and mix for 10-15 minutes using P-K liquid solid blender. Spray Phase B into Phase A. Mix thoroughly and package.

**SOURCE: Sutton Laboratories: Suggested Formulations**

Body Powder Mousse with Panthenol & Vitamin E

<u>Ingredients:</u>	<u>% by Wt.</u>
Part I:	
Deionized Water	35.05
Cerasynt 840	0.50
Part II:	
Alcohol SDA 40, 95%	35.00
Cetal	0.50
Ceraphal 65	2.00
Vitamin E Acetate, USP-FCC (Code 60526)	0.50
Part III:	
Lo-Micron Talc #1	25.00
Aerosil 200	0.25
Part IV:	
Perfume Oil	0.20

Procedure:

Mix ingredients in Part I. Heat to 50C. Mix ingredients in Part II until thoroughly dissolved. Add Part II to Part I and mix thoroughly. Mix ingredients in Part III and add to mixture slowly with mixing until thoroughly dispersed. Add Part IV and mix. Fill and pressurize.

<u>Aerosol Fill:</u>	<u>% by Wt.</u>
Concentrate	95.00
Propellant A-46	5.00

Components:

Container: 2 oz. Boxal, organosol lined  
 Valve: Precision  
 Stem: 2 x 0.020"  
 Body: Inverted with tailpiece  
 Actuator: Foam Spout  
 Formulation MU 503

Nail Conditioner with Panthenol

<u>Ingredients:</u>	<u>% by Wt.</u>
Part I:	
Deionized Water	50.00
Carbopol 934	0.15
Part II:	
Deionized Water	27.15
Triethanolamine, 98%	0.05
1,3-Butylene Glycol	2.50
Part III:	
d1-Panthenol, Cosmetic Grade (Code 63920)	5.00
SD Alcohol #40, 95%	15.00
Triton N-101	0.10
Perfume Oil	0.05

Procedure:

Sift the Carbopol into the water with rapid agitation. Heat to 75C and mix until all the Carbopol has dissolved. Add premixed Part II. Cool to room temperature, then add premixed Part III.  
 Formulation NC 701

SOURCE: Roche Chemical Division: Suggested Formulations

Concealer

A highly opaque cream concealer suitable for use under the eye or anywhere on the face. The Mearimica CF aids in a smooth after-feel while maintaining a desirable matte effect.

<u>Phase:</u>	<u>Ingredients:</u>	<u>% wt.</u>
A.	Water (q.s. to 100%)	53.50
	Magnesium Aluminum Silicate (Veegum)	2.00
B.	Propylene Glycol	8.00
	Triethanolamine (TEA 99%)	1.50
	Cellulose Gum (CMC-7LF)	1.00
	Antimicrobial (water soluble)	q.s.
C.	Titanium Dioxide	12.00
	Iron Oxide (C33-8073 Cosmetic Yellow)	1.00
	Iron Oxide (C33-8075 Cosmetic Russet)	0.50
	Iron Oxide (C33-115 Cosmetic Brown)	0.50
D.	Mearimica CF	6.00
	Boron Nitride	5.00
E.	Stearic Acid (Emersol 120)	3.00
	Glyceryl Stearate S.E. (Aldo MSD)	2.00
	Mineral Oil (Carnation)	2.00
	Isopropyl Lanolate (Amerlate P)	1.50
	Isostearic Acid (Emersol 871)	0.50
	Antimicrobial (oil soluble)	q.s.

Procedure:

- I. Disperse Veegum into water using high shear mixing until smooth. II. Add Phase B slurry to Phase A and mix until smooth. III. Pulverize Phase C and add to Phase A-B using high shear mixing until smooth. IV. Add Phase D to Phase A-B-C while heating to 75+-5C and mix until smooth.
- V. In a support vessel heat Phase E ingredients to 75+-5C.
- VI. Add Phase E to Phase A-B-C-D with gentle agitation, maintaining temperature at 75+-5C.
- VII. Maintain constant agitation and cool batch to 35+-5C; store or fill into appropriate containers.

Face Bronzer Pressed Powder

This pressed powder formulation imparts a warm glow to the skin. It can be used to mimic a suntan or enhance it.

<u>Phase:</u>	<u>Ingredients:</u>	<u>% wt.</u>
A.	Talc (q.s. to 100%)	38.70
	Zinc Stearate	6.00
	Iron Oxides (C33-8074 Cosmetic Russet)	8.80
	Iron Oxides (C33-5136 Cosmetic Brown)	6.50
	Iron Oxides (C33-8073 Cosmetic Yellow)	3.50
	Iron Oxides (C33-134 Cosmetic Black)	0.90
	Iron Oxides (C33-5138 Cosmetic Russet)	0.90
	Cloisonne' Super Gold 232Z	1.00
	Flamenco Velvet 120V	6.50
	Shinju 100T	21.20
	Antimicrobials	q.s.
B.	Fragrance	q.s.
	Antioxidant	q.s.
	Mineral Oil	3.50
	Octyl Methoxycinnamate (Parsol MCX)	2.50

SOURCE: The Mearl Corp.: Formulations CLE-910982 & CLF-921235

Conditioning Skin Mousse

An emollient moisturizing skin cream with Panthenol.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Polyquaternium 4	0.50
2. Distilled Water	88.00
3. Propylene Glycol	2.00
4. Triethanolamine (50%)	1.00
5. Preservative	QS
6. Ritapan DL	0.50
Part B:	
7. Mineral Oil	2.00
8. Ritawax ALA	0.50
9. Ritachol	1.50
10. Glyceryl Stearate S.E.	0.75
11. Rita CA	0.25
12. Stearic Acid	1.00
13. Isopropyl Myristate	2.00
Part C:	
14. Fragrance	QS

Compounding Procedure:

Dissolve Polyquaternium 4 in water. Add remaining ingredients of Part A while mixing. Heat to 75°C. Prepare Part B and heat to 75°C. When each is uniform, add Part B to Part A. Cool. Add Part C when 25°C. Fill.

Formulation HB-89-PA-6

Penetrating Moisturizer (Pump)

A liquid moisturizer suitable for use with a pump. May be used as an after sun or during exposure moisturizer.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	80.90
2. Glycerin	10.00
3. Propylene Glycol	5.00
4. Hydrolyzed Animal Protein	1.00
5. dl-Panthenol	1.00
6. Laneto 50	1.00
7. Quaternium 18	0.70
8. Methylparaben	0.15
9. Propylparaben	0.05
10. Imidazolidinyl Urea	0.20
11. Color and Fragrance	QS

Compounding Procedure:

Combine all ingredients, mix until uniform.  
Formulation HB-89-PA-1

SOURCE: R.I.T.A. Corp.: Suggested Formulations

**Crayon Eyeshadow**

This formulation is non-greasy, glides on evenly and easily, and gives lustrous highlights.

<u>Phase:</u>	<u>Ingredients:</u>	<u>%wt.</u>
A.	Castor Oil (q.s. to 100%)	31.50
	Beeswax (White Bleached Beeswax)	4.50
	Candelilla Wax (Candelilla Wax Refined Flakes)	4.50
	Myristyl Myristate (Crodamol MM)	4.50
	Octyl Palmitate	4.50
	Isopropyl Palmitate (and) Lanolin Oil	
	(Isopropylan 33)	4.50
	Ozokerite Wax (Ozokerite Wax 77W)	5.00
	Shea Butter (Shebu Refined)	6.00
	Isopropyl Myristate	3.00
	Antioxidant	q.s.
	Antimicrobial	q.s.
B.	Gemtone Sapphire G0011	32.00

**Procedure:**

1. Weigh all the ingredients in Phase A into a heated vessel and raise temperature to 85+-3C, stirring until melted and uniform. II. Add in phase B and mix until all the pearl pigment is well dispersed. III. Pour at 75+-5C

Note: If iron oxide or organic pigments are used, they should first be dispersed in castor oil; this mixture should then be milled in either a colloid or roller mill.

**Typical Properties:**

Droop Point (44C): Passes  
Capillary Point: 50C+-3C  
Formulation CLE-92009

**Emulsion Cream Eyeshadow**

This product is a rich cream with coconut oil emollient, which is customarily packaged in an automatic dispenser. It displays excellent application, coverage and luster characteristics.

<u>Phase:</u>	<u>Ingredients:</u>	<u>%wt.</u>
A.	Sucrose Distearate (Crodesta F-10)	1.10
	Glycerol Monostearate (Pure)	5.30
	Hydrogenated Coconut Oil	5.30
	PPG-5 Lanolin Wax (Propoxyol-5)	1.40
	Oleth-20 (Brij 98)	1.40
	Antimicrobial (oil soluble)	q.s.
B.	Methyl Gluceth-20 (Glucam E-20)	3.50
	Lauramine Oxide (Ammonyx LO)	0.70
	Distilled Water (qs to 100%)	51.30
	Antimicrobial (water soluble)	q.s.
	Cloisone' Rouge Flambe' 440X	15.00
	Duochrome YR (Gold/Red) 422C	15.00

**Procedure:**

- I. Add Phase B ingredients to a heated vessel and stir bringing temperature to 75+-3C. II. Add Phase A ingredient to the primary vessel and heat to 75+-3C, mixing until uniform. III. Add Phase B to Phase A with constant sweep agitation. IV. Cool gradually to 35+-5C and fill.

Source: The Mearl Corp.: Formulation CLE-920011



Cream Eye Shadow

<u>Phase:</u>	<u>Ingredients:</u>	<u>Percent by Weight</u>
1	Stearic acid	3.00
	Lexemul 515	2.00
	Promulgen D	1.00
	Candelilla wax	1.00
	Cerephyl 424	1.00
	DC 200 fluid	0.50
	Propylparaben	0.10
2	Deionized water	34.30
	Ultramarine blue	6.00
	TiO <sub>2</sub>	1.50
3	Timica pearlwhite	5.00
4	Deionized water	30.00
	PVP	4.00
5	Propylene glycol	5.00
	Methocel 40-202	0.20
	Veegum	0.50
6	Deionized water	2.00
	TEA	1.20
	Phenoxyethanol	0.50
	Versene 100 (EDTA)	0.10
	Antifoam AF emulsion	0.05
7	Deionized water	1.00
	Dowicil 200 preservative	0.05

**Procedure:**

1. Weigh ingredients in oil phase (Phase 1) into a clean auxiliary compounding kettle equipped with a mixer. Heat to 82C.
2. Weigh water (Phase 2) into main compounding kettle equipped with a colloid mill. Slowly add pigments and mill until all pigments are completely dispersed.
3. Add Phase 5 (which has been previously blended) and mill until smooth.
4. Add Phase 6 and previously dispersed Phase 4. Mill for 5 minutes and turn off mill. Heat water phase to 80C with mixing.
5. With water phase at 80C, add oil phase at 82C and mix 10 minutes. Start to cool batch.
6. When batch reaches 60C, slowly add Phase 3 (Timica Pearl-white). Continue mixing.
7. When batch reaches 45C, add Phase 7 (dissolved Dowicil 200). Continue mixing batch to room temperature. Allow batch to reach proper viscosity by sitting several hours before filling.

**SOURCE:** Dow Chemical Co.: Suggested Formulation

**Cream Eyeshadow**

A cream eyeshadow formula that goes on smooth, sets quickly, and delivers long-wearing performance.

<u>Phase:</u>	<u>Ingredients:</u>	<u>%wt.</u>
A.	Water (q.s. to 100%)	63.9
	Magnesium Aluminium Silicate (Veegum)	1.5
B.	Cloisonne' Green 828C	12.5
	Cloisonne' Nu-Antique Green 828CB	2.0
	Mearlmica SVA	5.5
C.	Propylene Glycol	8.0
	Cellulose Gum (CMC-7LF)	1.0
D.	Triethanolamine (TEA 99%)	0.8
	Antimicrobial (water soluble)	q.s.
E.	Stearic Acid	3.5
	Glyceryl Stearate (Aldo MSC)	0.8
	Oleyl Alcohol (Novol)	0.5
	Antimicrobial (oil soluble)	q.s.

**Procedure:**

- I. Disperse Veegum into Water using high shear mixing until smooth.
- II. Blend Phase B and add to Phase A, mixing until thoroughly dispersed.
- III. Add Phase C slurry to Phase A-B and mix until smooth.
- IV. Add Phase D to Phase A-B-C with gentle agitation and heat to 75+-5C.
- V. In a support vessel heat Phase E ingredients to 75+-5C with gentle agitation.
- VI. Add Phase E to Phase A-B-C-D with gentle agitation, maintaining temperature at 75+-5C.
- VII. Maintain constant agitation and cool batch to 35+-5C; store or fill into appropriate containers.

**Typical Properties:**

Identity: Oil/Water Emulsion  
 Viscosity: 5100+-500 cps  
 pH: 7.30+-0.5  
 Formulation CLE-920003

**Velvety Pressed Powder Eyeshadow**

Pressed powder eyeshadow formulation having a smooth feel and a velvety look when applied to the skin.

<u>Phase:</u>	<u>Ingredients:</u>	<u>%wt.</u>
A.	Talc (qs. to 100%)	32.00
	Zinc Stearate	3.00
	Chromium Oxide Green (C61-1245 Cosmetic Green)	3.00
	Timica Sparkle 110P	11.20
	Antimicrobial	q.s.
	Mearlmica SVA	38.80
B.	Antioxidant	q.s.
	Squalane	5.00
	Mineral oil	7.00

I. Thoroughly blend and disperse Phase A in appropriate dry blending/dispersing equipment. II. Add Phase B ingredients into a support vessel. Heat and mix until uniform. III. Spray Phase B into premixed Phase A and continue blending until uniform. IV. Pulverize and press.

SOURCE: The Mearl Corp.: Formulation CLE-911038

Cream Make-up

<u>Phase:</u>	<u>Ingredients:</u>	<u>Percent by Weight</u>
1	Stearic acid	3.50
	Lexemul P	2.00
	Promulgen D	1.00
	Cerephyl 424	1.50
	Carnation oil	10.00
	Dow Corning 200	0.50
	Cetyl alcohol	0.50
2	Deionized water	59.15
	Titanium dioxide	9.00
	Mapico yellow	1.60
	Red 3098	0.60
	Blade iron oxide	0.30
3	Propylene glycol	5.00
	Methylparaben	0.20
	Ethylparaben	0.10
	Veegum	0.50
	Methocel 40-202	0.20
4	Deionized water	2.00
	Triethanolamine	1.20
	Dow Corning antifoam AF emulsion	0.05
5	Deionized water	1.00
	Dowicil 200 preservative	0.05
	Versene 100 (EDTA)	0.05

Procedure:

1. Weigh all materials in Phase 1 into a clean auxiliary compounding kettle equipped with mixer. Heat to 82C with mixing.
2. Weigh water in Phase 2 into main compounding kettle equipped with a colloid mill. Slowly add pigments and mill until completely dispersed.
3. Blend the ingredients in Phase 3 completely. Add Phase 3 to the dispersed pigment phase (Phase 2) and mix until smooth. Add Phase 4 and mix until smooth. Mill for 5 minutes.
4. Heat aqueous phase to 80C with mixing.
5. When water phase reaches 80C, start adding oil at 82C slowly to water phase. When all the oil phase has been added to water phase, continue mixing maintaining 80C temperature. Mix ten minutes.
6. Begin to cool batch.
7. At 45C add Phase 5 which has been previously blended.
8. Cool batch to room temperature with mixing. Allow batch to sit several hours to reach proper viscosity before filling.

SOURCE: Dow Chemical Co.: Suggested Formulation

Creamy Blusher

<u>Phase:</u>	<u>Ingredients:</u>	<u>Percent by Weight</u>
1	Stearic acid	3.00
	Lexemul P	2.00
	Lexemul 515	1.50
	Candelilla wax	1.00
	Ozokerite	1.00
	Beeswax	1.00
	Dow Corning 200	0.50
	Carnation oil	6.00
	Myristyl Myristate	2.00
	Propylparaben	0.10
2	Deionized water	63.35
	Titanium dioxide	5.00
	Mapico yellow	2.00
3	Red iron oxide 3098	1.50
	Deionized water	2.00
	Triethanolamine	1.50
	Versene 100 (EDTA)	0.10
4	Antifoam AF emulsion	0.05
	Propylene glycol	5.00
	Methocel 40-202	0.20
	Veegum	0.50
	Phenoxyethanol	0.50
	Methylparaben	0.20

**Procedure:**

1. Weigh all materials in Phase 1 into a clean auxiliary compounding kettle equipped with a mixer. Heat to 82C with mixing.
2. Weigh water (Phase 2) into main compounding kettle equipped with a colloid mill. Slowly add pigments, milling until completely dispersed. Start adding Phase 4 dispersion which has been previously mixed. Mill until smooth. Add Phase 3 mixture and mill for 5 minutes. Turn off mill and drain into batch.
3. Start heating milled water phase to 80C. With oil phase at 82C and water phase at 80C, slowly add oil to water with moderate mixing.
4. Mix batch at 80C until a homogeneous emulsion is formed. Mix ten minutes more then start to cool.
5. Mix to room temperature.

**Note:**

When mixing frosted shades, add Phase 5 (Timica Pearlwhite) to batch during cooling phase in step 3 when batch is between 60-65C.

**SOURCE:** Dow Chemical Co.: Suggested Formulation

**Creamy Pearl Blush**

This formulation yields a smooth, creamy product that is easy to apply and allows sufficient "play time" for blending, yet shows excellent wear ability with good luster/non-greasy feel

<u>Phase:</u>	<u>Ingredients:</u>	<u>%wt</u>
A.	Laneth-16 (and) Ceteth-16 (and) Oleth 16 (and) Steareth 16 (Solulan 98) Isopropyl Myristate Beeswax (synthetic) Sorbitan Monostearate (Arlacel 60) Distilled Lanolin Alcohol (Super Hartolan) Glyceryl Tribehenate (Synchrowax HR-C) Paraffin (Paraffin Wax Fully Refined 130) Antimicrobial (oil soluble) Antioxidant	2.20 2.70 2.70 5.50 5.30 3.90 4.40 q.s. q.s.
B.	Propylene Glycol Polyoxyethylene (20) Sorbitan Monostearate (Polysorbate 60) Demineralized Water (qs. to 100%) Antimicrobials (water soluble)	5.40 2.60 45.40 q.s.
C.	Cloisone' Super Red 434Z Cloisone' Rouge Flambe 440X Flamenco Superpearl 120C	6.70 6.60 6.60
D.	Fragrance	q.s.

- I. Heat Phase A to 85+-3C with stirring until all ingredients are melted. II. In a separate vessel heat Phase B to 85+-3C with stirring until fully dispersed. III. Add Phase C to Phase B with stirring until fully dispersed and uniform. IV. Add Phase A to combined Phase B-C with stirring and remove from heat. V. Add Phase D with stirring at 43+-3C. VI. Drop batch below 30C and fill at room temperature. Formulation CLF-921236

**Shimmering Pearl Pressed Powder Blush**

This formulation provides a lustrous, pressed powder blush cake which is easily applied with a brush or applicator. It blends well, is long-wearing, and resists breakage.

<u>Phase:</u>	<u>Ingredients:</u>	<u>%wt.</u>
A.	Talc (qs. to 100%) Zinc Stearate Shinju 100T Mearlite GBU Cloisone' Cerise Flambe 550Z D&C Red #7 (C19-011 Rubine Lake) Antimicrobials	25.20 11.00 11.00 5.00 32.00 0.80 q.s.
B.	Fragrance Antioxidant Mineral Oil (Ervol) Sorbitan Diisostearate (Emsorb 2518)	q.s. q.s. 2.50 2.50
C.	Timica Golden Bronze 240A	10.00

- I. Thoroughly blend and disperse Phase A in appropriate dry blending/dispersing equipment. II. Add Phase B ingredients into a support vessel. Heat and mix until uniform. III. Spray Phase B into premixed Phase A and continue blending. IV. Pulverize and return to blender. V. Add Phase C to Phase A-B and mix until uniform.

SOURCE: The Mearl Corp.; Formulation CLF-910155

Cuticle Conditioner

This cuticle conditioner leaves the cuticle soft and smooth to the touch. Ritachol and Ritalan have been added for lanolin-related skin conditioning attributes. The emulsion is oil/water and smooth-textured. It applies easily and resists removal by water.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Rita GMS	2.00
2. Stearic Acid	2.00
3. Ritachol 1000	5.00
4. Ritachol	3.00
5. Ritalan	2.00
6. Dimethicone	1.00
7. Propylparaben	0.15
8. Rita CA	4.00
9. Mineral Oil	2.00
Part B:	
10. Distilled Water	69.20
11. Propylene Glycol	3.00
12. Methylparaben	0.05
13. Sodium Lauryl Sulfate	1.25
14. Acrylic/Acrylate Copolymer	5.00
15. Fragrance	QS
16. Imidazolidinyl Urea	0.35

Add item 14 into item 10 and stir until thoroughly dispersed, then add items 11, 12, 13 and 16. Weigh Part A into another container and begin stirring and heating. Begin heating Part B. When Part A and B are at 70-73C, add Part A to Part B and continue stirring. When all of Part B has been added, begin cooling. Cool the batch to 40-43C and add the fragrance, Cool to 25-30C and package into suitable containers.

Formula HB-89-R-35

Cuticle Conditioner

This is a cuticle conditioner which leaves the cuticle soft and smooth to the touch. Ritachol and Ritaderm have been added for lanolin-related skin conditioning and natural moisturizing factor properties. The Pationic ISL conditions and moisturizes the skin. The emulsion is oil/water and smooth-textured to the touch. It applies easily and resists removal by water.

<u>Ingredients:</u>	<u>% W/W</u>
1. Glyceryl Stearate	2.00
2. Stearic Acid	2.00
3. Ritachol 1000	6.00
4. Ritachol	3.00
5. Ritaderm	2.00
6. Dimethicone	1.00
7. Pationic ISL	2.50
8. Distilled Water	76.50
9. Propylene Glycol	5.00
10. Color, Fragrance and Preservatives	QS

Combine items 1-7 and heat to 70-75C. Combine items 8 and 9 and heat to 70-75C. Combine both phases, cool with stirring to 45C. Add remaining ingredients.

Source: R.I.T.A. Corp.: Formulation HB-89-R-36

Dark Beige Liquid Makeup

Phase A:	% Weight
Water	48.880
Cellulose Gum	0.150
Magnesium Aluminum Silicate (Veegum R)	0.500
Propylene Glycol	5.000
Lecithin	1.000
Allantoin	0.050
Methylparaben	0.200
Triethanolamine, 85%	1.620
Phase B:	
Titanium Dioxide	9.660
Kaolin	2.250
Talc	1.026
Iron Oxide (Brown Oxide 7061)	0.360
Iron Oxide (Red Oxide 7067)	0.300
Iron Oxide (Red Oxide 7060)	0.684
Iron Oxide (Yellow Oxide 7055)	0.600
Ultramarine Blue	0.120
Phase C:	
Lanolin Alcohol	1.500
Glyceryl Stearate	0.800
Isopropyl Palmitate	4.000
Stearic Acid	0.500
Caprylic/Capric Triglyceride	6.000
Isocicosane (and) Isohexacontane (Permethyl 102A, 75% (and) Permethyl 104A, 25%)	12.000
Isostearic Acid (Emersol 871)	2.400
Propylparaben	0.100
Phase D:	
Germall 115	0.200
Phase E:	
Fragrance	0.100
Procedure:	

In a suitable kettle equipped with a Lightnin-type mixer, charge water, and slowly sprinkle in Veegum R. Hydrate well. Sprinkle in cellulose gum and mix for 15-20 minutes, depending upon the size of the batch and equipment used. Start heating kettle to 65-70C and add balance of Phase A excluding triethanolamine. Bring temperature up to 70-72C and add Phase B in order given. Pass entire batch through homomixer, or if possible, use homomixer in tank and circulate batch through colloid mill (in line). Check pigment dispersion and continue mixing until no visible color streaks show on draw down.

In a separate vessel equipped with a Lightnin-type agitation, combine Phase C and heat until a clear, uniform solution is achieved. Maintain temperature at 72-75C. When both phases are at proper temperature, add the triethanolamine to batch. Add Phase C to batch. Mix slowly to avoid aeration. After mixing for 15-20 minutes, cool batch to 50C and add Phase D, then add Phase E. Continue cooling to 40C. Submit sample to lab for color evaluation. Adjust batch with small portions and grind pigment well. After color is approved, cool to room temperature and pour.

SOURCE: Sutton Laboratories: Suggested Formulation

**Dual Face Powder**

A face powder formulation designed for dual application, wet or dry. This product will impart a transparent foundation finish upon wet application; whereas, upon dry application will impart a soft velvety look.

<u>Ingredients:</u>	<u>%wt.</u>
A. Mearltalc TCA	70.50
Mearlmica SVA	19.50
Zinc Oxide (Zinc Oxide USP)	2.00
Iron Oxide (Yellow Iron Oxide C33-8073)	0.70
Iron Oxide (Brown Iron Oxide C33-115)	0.70
Iron Oxide (Red Iron Oxide A6205)	0.30
Iron Oxide (Brown Iron Oxide C33-5136)	0.30
Antimicrobials	q.s.
B. Fragrance	q.s.
Antioxidant	q.s.
Squalane (Fitoderm)	2.00
Dimethicone (Dow Corning 200 Fluid)	0.50
Mineral Oil	3.50

**Procedure:**

- I. Thoroughly blend and disperse Phase A in appropriate dry blending/dispersing equipment.
  - II. Spray Phase B into premixed Phase A and continue blending.
  - III. Pulverize and press.
- Formulation CLF-910189E

**Silky Face Powder**

An ultra-luxurious pressed powder formulation using creamy textured Mealmica SVA. This product provides glide on application, smooth silky feel and long lasting cling.

<u>Phase:</u>	<u>Ingredients:</u>	<u>%wt.</u>
A.	Talc (q.s. to 100%)	55.10
	Mearlmica SVA	15.00
	Boron Nitride	10.00
	Titanium Dioxide (C47-056)	8.50
	Silica (Spherica P-1500)	2.30
	Iron Oxide (C33-8073 Cosmetic Yellow)	1.50
	Iron Oxide (C33-115 Cosmetic Brown)	1.00
	Iron Oxide (62050 Red Iron Oxide)	0.60
	Antimicrobials	q.s.
B.	Fragrance	q.s.
	Antioxidant	q.s.
	Isopropyl Palmitate (and) Lanolin Oil (Isopropylan 36)	4.50
	Mineral Oil	1.50

**Procedure:**

- I. Thoroughly blend and disperse Phase A in appropriate dry blending/dispersing equipment.
- II. Spray premixed Phase B into premixed Phase A and continue blending.
- III. Pulverize and press.

Formulation CLF-910959

SOURCE: The Mearl Corp.: Suggested Formulations



Emulsion Cream Mascara

This product is a pearly cream, which builds thicker and longer-looking lashes. It can be easily removed with soap and water.

Phase:	Ingredients:	%wt.
A.	Demineralized Water (qs. to 100%)	47.50
	Triethanolamine (TEA 99%)	2.00
	Propylene Glycol	15.00
B.	Flamenco Twilight Gold 230ZB	12.00
C.	Candelilla Wax (Refined, Candelilla Wax)	12.00
	Stearic Acid (Emersol 120)	4.50
	Isostearic Acid (Emersol 871)	4.50
	Antimicrobials (oil soluble)	q.s.
D.	Demineralized Water	2.50
	Antimicrobials (water soluble)	q.s.

Procedure:

- I. Add Phase A ingredients to the main vessel.
- II. Add Phase B to Phase A with agitation, and raise the temperature to 75+-3C.
- III. Add Phase C to the support vessel and mix while raising temperature to 80+-3C.
- IV. When the water and oil phases are both at 75+-3C, add Phase C to Phase A-B and maintain sweep agitation.
- V. With constant agitation cool batch to 50C and add pre-mixed Phase D solution to Phase A-B-C.
- VI. Continue stirring and cooling to 40C; batch may be filled below this temperature.

Formulation CLE-920012

Waterproof Mascara

This formulation offers a high viscosity waterproof mascara, suitable for use while swimming. It is extremely long-wearing and can be removed with baby oil.

Phase:	Ingredients:	%wt.
A.	C11-12 Isoparaffin (Isopar H) (q.s. to 100%)	45.70
	Petroleum Distillate (Shell-Sol-71)	10.00
	Tall Oil Glycerides (Zonester 85)	10.00
	Carnauba Wax (#1 Yellow Carnauba Wax)	3.00
	Polyethylene (A-C Polyethylene)	2.00
B.	Talc	3.00
	Kaolin	3.00
	Flamenco Twilight Blue 620CB	10.00
	Antimicrobials	q.s.
C.	Quaternium-18 Hectorite (Bentonite 38)	10.00
D.	Propylene Carbonate	3.30

Procedure:

- I. Add Phase A ingredients to a vessel equipped with a high shear agitator; heat to 95+-2C with gentle agitation until a clear solution is obtained.
- II. Add Phase B to Phase A and mix until uniform. Note: Care should be taken to avoid loss of volatile solvents.
- III. Add Phase C to Phase A-B and mix vigorously until smooth.
- IV. Add Phase D to Phase A-B-C with slow agitation; a heavy gel will form.
- V. Cool batch to 60C and fill or pump into storage drums.

SOURCE: The Mearl Corp.; Formulation CLE-910110

Facial Cleanser

This cleansing formulation is light, non-greasy and water-rinsable. It provides thorough cleansing without drying the skin.

<u>Ingredients:</u>	<u>% by weight</u>
Part A:	
Deionized Water	89.55
Cocoamphodiacetate	1.00
Quaternium-15	0.10
Methylparaben	0.10
Propylparaben	0.05
Part B:	
Isostearyl Benzoate	4.00
Diethyl Maleate	2.00
Caprylic/Capric Triglyceride	1.00
Octyl Hydroxystearate	1.00
Pemulen TR-2	0.20
Carbopol 980	0.60
Part C:	
AMP-95	0.40

Formulation PF-0164 suggested by B.F. Goodrich Chemical Group

Face Gel with Sulfur  
(for use on oily skin)

<u>Ingredients:</u>	<u>% by weight</u>
A. Ethanol, 96%	30.0
Water, distilled	50.1
Carbomer 980	4.0
B. Glycerol	4.0
Sulfur	1.0
C. Water, distilled	12.7
Tris Amino	0.8
Vitamin B Complex CLR	0.5

Procedure:

- Part A: Mix the alcohol and water. Disperse the Carbomer 980 in this mixture.
- Part B: Grind sulfur with glycerol (possibly in a salve mill). Stir A slowly into B.
- Part C: Dissolve Tris Amino in the water and stir into A + B. Work vitamin B complex into the finished gel.

Formulation PF-0190E

SOURCE: Angus Chemical Co.: Suggested Formulations

Facial Cleanser

<u>Ingredients:</u>	<u>% by weight</u>
Part A:	
Deionized Water	89.55
Cocoamphodiacetate	1.00
Quaternium-15	0.10
Methylparaben	0.10
Propylparaben	0.05
Part B:	
Isostearyl Benzoate	4.00
Dioctyl Maleate	2.00
Caprylic/Capric Triglyceride	1.00
Octyl Hydroxystearate	1.00
Pemulen TR-2	0.20
Carbopol 980	0.60
Part C:	
AMP-95	0.40

Procedure:

Combine A ingredients in a vessel which will contain the entire formulation. Mix to dissolve parabens. Combine B ingredients in a separate vessel. Mix to disrupt any soft lumps of Pemulen and Carbopol. With moderate agitation, add the B slurry to A. Mix for 10-20 minutes to allow resins to swell. Add C and mix vigorously to produce a smooth, white cream.

Formulation PF-0226 suggested by B.F. Goodrich

Nail Strengthening Composition

<u>Ingredients:</u>	<u>% by weight</u>
Mimosa extract	0.5
Sodium lauroyl sarcosinate	1.6
Sodium polyacrylate	1.0
Bronopol	0.1
Water	q.s. to 100.00
Sodium hydroxide - adjust pH to 8.0	

This preparation for strengthening the fingernails is described in German Patent DE 3,403,476. The patent claims that the strength of the fingernails may be improved by treating them with Quebracho extract (especially Schinopsis balansae and S. lorentzii and/or Mimosa extract (Acacia mearnsii). These extracts contain condensed and hydrolyzable tannins that are said to be bound rapidly to nail keratins.

Formulation PF-0124 from Cosmetics and Toiletries, Vol. 101, January 1986

SOURCE: Angus Chemical Co.; Suggested Formulations

Facial Cleanser

A clear facial cleanser which has good cleaning properties, yet is proven to have no irritation.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Distilled Water	63.33
2. Sodium Laureth Sulfate (2 Mole)	16.67
3. Pationic 138C	10.00
4. Ritamid C	4.00
5. Methylparaben	0.10
Part B:	
6. Triethanolamine (50%)	2.00
Part C:	
7. Perfume	0.20
8. Glydant 40-700	0.20
Part D:	
9. Sodium Chloride (25% Solution)	3.50

Compounding Procedure:

Heat Part A to 165F. While mixing, neutralize to 7.5 with Part B. Cool to 120F. Add Part C. Adjust viscosity with Sodium Chloride (25% solution).

Initial pH: 7.0 - adjusted to 7.5. After 24 hours: 7.8

Formulation 102-13

Temporary Wrinkle Remover

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Acritamer 941	0.20
2. Distilled Water	73.15
3. Glycerin	4.00
4. Methylparaben	0.10
Part B:	
5. Ritachol	2.50
6. Ritawax ALA	1.00
7. Glyceryl Stearate	1.00
8. Stearic Acid	2.00
9. Ritalan	4.50
10. Propylparaben	0.05
Part C:	
11. Triethanolamine (50% Solution)	2.00
Part D:	
12. Bovinal 30	7.50
Part E:	
13. 2-Phenoxyethanol	1.00
14. Benzyl Alcohol	1.00

Compounding Procedure:

Disperse Acritamer in water and glycerin with rapid agitation. When uniform, heat to 75C. Combine part B and heat to 75C. Add part B to part A with agitation, avoid aeration. Mix until uniform. Add part C and mix until uniform. Cool to 30C. Add part D and mix until uniform. Add part E.

Formulation 108-3D

SOURCE: R.I.T.A. Corp.; Suggested Formulations

Foot Cooling Gel

An easily applied gel which soothes and cools feet.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Distilled Water	45.85
2. Glycerin	1.50
3. Ucon 50 HB-660	1.00
Part B:	
4. Isopropyl Alcohol	50.00
5. Acritamer 940	1.00
6. Menthol	0.15
Part C:	
7. Isopropylamine/Distilled Water	+ -0.50

Compounding Procedure:

Combine materials in Part A with agitation and mix until uniform. In Part B add Menthol to the Isopropyl Alcohol. Mix until uniform, sprinkle in Acritamer and mix until a thin, cloudy dispersion without lumps is attained. Prepare Part C and mix.

Slowly add Part A to Part B with moderate agitation. Continue mixing for 30 minutes to ensure a uniform solution. Slowly add Part C with agitation until the pH of the solution is 6.0 to 6.2 and a clear gel is formed. (Sweep agitation is recommended).

Properties:

Initial Viscosity: Brookfield: 40,000 cps.

48 Hour pH: 6.0      48 Hour Viscosity: Brookfield: 57,000 cps

Formulation: H-89-A-10

Foot Cooling Gel

An easily applied gel which soothes and cools feet.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Distilled Water	45.85
2. Glycerin	1.50
3. Ucon 50 HB-660	1.00
Part B:	
4. Alcohol SD40	50.00
5. Acritamer 940	1.00
6. Menthol	0.15
Part C:	
7. Isopropanolamine/Distilled Water (50/50)	0.50

Compounding Procedure:

Part A: Combine materials with agitation until thoroughly mixed. Part B: Add Menthol to the Alcohol SD40 and mix until dissolved. Sift Acritamer 940 into the Alcohol SD40 with rapid agitation and mix until a thin, cloudy dispersion without lumps is attained. Part C: Combine isopropanolamine and distilled water and mix until thoroughly blended.

Slowly add Part A to Part B with moderate agitation. Continue mixing for 30 minutes to insure a uniform solution. Slowly add Part C with agitation until the pH of the solution is 6.0 to 6.2 and a clear gel is formed. (Sweep agitation is preferred).

Initial Viscosity: Brookfield: 60,500 cps      Initial pH: 5.9

SOURCE: R.I.T.A. Corp.; Formulation 101-184B

Gel-Blush Frost

This easy to prepare luxurious gel blush possesses a remarkable velvety feel, excellent spreadability, and a warm frost glow

<u>Phase:</u>	<u>Ingredients:</u>	<u>%wt.</u>
A.	Ethylene/Vinyl Acetate Copolymer (A-C Copolymer 400)	9.50
	Acetylated Lanolin Alcohols (Acetulan)	10.00
	Mineral Oil (Light) 125/135 SUS	10.60
	Lanolin Oil (Lanogene)	2.50
	Cyclomethicone (Silicone Fluid 344)	5.00
	Cyclomethicone (Silicone Fluid 345)	2.50
	Isopropyl Lanolate (Amerlate P)	4.50
	Ozokerite 170-D	2.00
	Beeswax (Synthetic)	2.00
	Isopropyl Myristate	13.10
	Lanolin Alcohol (Super Anatol)	8.00
	Antioxidant	q.s.
B.	Gemtone Tan Opal G005	5.30
	Gemtone Ruby G0010	10.00
	Gemtone Garnet G009	15.00
	Antimicrobials	q.s.
C.	Fragrance	q.s.

Procedure:

- I. Heat combined Phase A to 83+-3C with stirring until a clear solution is obtained. II. Add Phase B to Phase A and stir until uniform. III. Cool to 62+-3C and add Phase C. IV. Continue mixing and fill at 50+-5C.  
Formulation CLF-920023

Blush Stick

An easy to prepare stick blusher formulation which gives a natural radiance to the cheeks.

<u>Phase:</u>	<u>Ingredients:</u>	<u>%wt.</u>
A.	Isostearyl Neopentanoate (Schercemol 185)	33.70
	Talc (Cyprus Supra - qs. to 100%)	15.30
	Ozokerite Wax	13.00
	Castor Oil	11.00
	Candelilla Wax	4.00
	Octyl Methoxycinnamate (Parsol MCX)	3.00
	Antioxidant	q.s.
	Antimicrobial	q.s.
B.	Duochrome RY (Red/Gold) 224C	15.00
	Mattina Red 424F	5.00
C.	Fragrance	q.s.

Procedure:

- I. Weigh all the ingredients in Phase A into a heated vessel. Heat and stir until melted and uniform (75+-3C). II. Add Phase B maintaining temperature at 75+-3C and mix until all the pigment is well dispersed. III. Add Phase C and mix with constant stirring. IV. Mold into sticks. Note: If iron oxide or organic pigments are used, they should first be dispersed in castor oil; this mixture should then be milled in either a colloid or roller mill.  
Formulation CLF-920024

SOURCE: The Mearl Corp.; Suggested Formulations

Gentle Beauty Wash

<u>Ingredients:</u>	<u>% by weight</u>
Deionized Water	46.20
Propylene Glycol	8.00
50% Sodium Hydroxide	0.60
Bentone EW	0.40
Stearic Acid, Triple Pressed	8.00
Igepon AC78	11.00
Sipon ESY	11.00
Siponate DDB-40	5.00
Alconate SBR-3	2.50
Sodium Isethionate 55	6.50
Oxaban-A Preservative	0.05
Fragrance KU 70	0.75

**Procedure:**

Disperse the Bentone EW in the deionized water, sodium hydroxide and propylene glycol with rapid agitation. Start heating. Decrease agitation and add the stearic acid and Igepon AC78. Continue heating until the Igepon AC78 has dissolved (70C). Add the Sipon ESY, Siponate DDB-40, Alconate SBR-3 and Sodium Isethionate 55. Start cooling. Add the preservative and fragrance at 35C. The viscosity and pearl will develop upon standing.

Formulation PF-0170 from Personal Care Perspectives, Rhone-Poulenc, Vol. 1, Issue 2 August 1991

Moisturizing Gel

<u>Ingredients:</u>	<u>% by weight</u>
A. Water	89.20
Glycerin	7.00
Sorbitol (70%)	3.00
Oxaban-A	0.10
B. Carbomer 980	0.50
C. AMP-95	0.20

**Procedure:**

1. Combine the A ingredients and, with rapid agitation, slowly add Carbomer 980. Mix until a uniform dispersion is obtained—usually about 20 minutes.
2. Add AMP.

Formulation PF-0188

SOURCE: Angus Chemical Co.: Suggested Formulations

**Glossy Lipstick**

This "glossy" pearl lipstick formulation provides very high luster, even before flaming. In addition, halogenated fluoresceins (e.g. D&C Red #27) can be added to the formula to obtain a more long lasting effect.

<u>Phase:</u>	<u>Ingredients:</u>	<u>%wt.</u>
A.	Candelilla Wax	8.00
	Ozokerite Wax	1.60
	Microcrystalline Wax (Multiwax 180W)	1.60
	Octyl Palmitate (Wickenol 155)	6.00
	Cetyl Palmitate (Cutina CP)	3.00
	Lanolin Oil (Lanogene)	18.00
	Shea Butter (Shebu Butter)	2.50
	Castor Oil (q.s. to 100%)	44.30
	Antioxidant	q.s.
	Antimicrobials	q.s.
B.	Cloisonne' Super Red 434Z	5.00
	Gemtone Sunstone G0012	10.00
C.	Fragrance	q.s.

**Procedure:**

- I. Weigh all the ingredients in Phase A into a heated vessel and raise temperature to 85+-3C, stirring until melted and uniform
  - II. Add in Phase B and mix until all the pearl pigment is well dispersed. III. Add in Phase C and mix with constant stirring.
  - IV. Pour at 75+-5C. V. Mold, cool and flame the lipsticks. Note: If iron oxide or organic pigments are used, they should first be dispersed in Castor oil, this mixture should then be milled in either a colloid or roller mill.
- Formulation CLL-921944

**Soft Lipstick**

<u>Phase:</u>	<u>Ingredients:</u>	<u>%wt.</u>
A.	Carnauba Wax	12.00
	Hydrogenated Lanolin (Lipolan)	13.00
	Stearyl Heptanoate (Crodamol W)	15.00
	Lauryl Lactate (Schercemol LL)	16.00
	Decyl Oleate (Cetiol V)	15.00
	Butyl Stearate	14.00
	Antioxidant	q.s.
	Antimicrobial	q.s.
B.	Flamenco Super Red 430Z	7.00
	Gemtone Garnet G009	2.00
	Gemtone Tan Opal G005	6.00
C.	Fragrance	q.s.

**Procedure:**

- I. Weigh all the ingredients in Phase A into a heated vessel and raise temperature to 85+-3C, stirring until melted and uniform
  - II. Add in Phase B and mix until all the pearl pigment is well dispersed. III. Add in Phase C and mix with constant stirring.
  - IV. Pour at 75+-5C. V. Mold, cool and flame the lipsticks.
- Formulation CLL-921968

SOURCE: The Mearl Corp.; Suggested Formulations



Ice Gel

<u>Ingredients:</u>	<u>% by weight</u>
A. Carbopol 1382	1.00
Water, Distilled	50.00
EDTA Acid	0.10
B. Tris Amino	1.20
Water, distilled	10.00
C. Menthol	0.05
Perfume oil	2.00
Cremophor RH 40	3.00
Ethanol	25.00
Water, distilled	to 100.00

Procedure:

Part A: Disperse Carbomer 980 and EDTA homogeneously in water.

Part B: Dissolve Tris Amino in water.

Part C: Dissolve menthol in ethanol and add the mixture of perfume oil and Cremophor. Mix C thoroughly with part A. Add part B.

Preservation: 0.1% Euxyl K 400

Protection against light: Uvinol 400

Formulation PF-0193E

Liposome Gel

<u>Ingredients:</u>	<u>% by weight</u>
A. Epikuron SH 200	0.5
Phosphate buffer	38.0
B. Carbomer 980	0.5
Tris Amino	0.5
EDTA	0.1
Water	80.4

Procedure:

Part A: Combine Epikuron and phosphate buffer, mix slowly at 70C for 30 minutes (Stephan Mixer UMC, 300 rpm), homogenize at high speed (1500 rpm) for 30 minutes and then cool to -25C while stirring for 5 minutes at 1500 rpm. Stir under vacuum (about 0.2 bar).

Part B: Disperse Carbomer 980 into water. Add EDTA. Add Tris Amino and continue to stir for 5 minutes. Stir under vacuum (about 0.2 bar) until homogeneous.

Part C: Mix A and B for 5 minutes at 300 rpm. Stir under vacuum (0.2 bar).

Formulation PF-0195E

SOURCE: Angus Chemical Corp.: Suggested Formulations

Lip Balm I (514122)

Drakeol 7, Light Mineral Oil USP	41.0 wt%
Ozokerite Wax	20.0
White Beeswax	15.9
Cetyl Alcohol	9.2
Candelilla Wax	7.2
Penreco Ultima, White Petrolatum USP	3.8
Butyl Stearate	2.9

Heat ingredients at 70C until completely melted, with stirring, to ensure homogeneity. Pour into molds and cool. BHT also may be added to the hot mixture if desired.

Lip Balm II (514133)

Penreco Ultima, White Petrolatum USP	48.99 wt%
Yellow Beeswax	10.05
Isopropyl Palmitate	9.00
Castor Oil	8.70
Candelilla Wax	6.00
Stearyl Alcohol	4.75
Ozokerite Wax	4.10
Carnauba Wax	4.10
Isopropyl Lanolate	3.20
Dimethicone	1.10
Vitamin E Acetate	0.01

Heat all ingredients together at 70C until melted. When the blend is completely uniform, pour into molds and cool. If desired, fragrance may be added just above the solidification point, prior to molding.

Creamy Lipstick Base (514157)

Castor Oil	40.0 wt%
Drakeol 7, Light Mineral Oil USP	17.0
Penreco Snow, White Petrolatum USP	8.0
Yellow Beeswax	7.0
Candelilla Wax	7.0
Isopropyl Myristate	5.0
Carnauba Wax	3.0
Ozokerite Wax	3.0

Heat all ingredients together with gentle stirring until melted. Once the blend is homogeneous, pour into molds and cool. Fragrance and antioxidants may be added just above the solidification point, prior to molding. Some of the castor oil may be substituted with a castor oil dispersion of lipstick pigments to give a final product.

SOURCE: Penreco: Penreco Cosmetic Formulary

Lip Glaze

A lip gloss formulation imparting excellent sheen and emollience to the lips. Can be applied by itself or over lipstick to enhance luster. Suitable for filling into tubes or automatic type containers.

Phase:	Ingredients:	%wt.
A.	Acetylated Lanolin (Modulan) (q.s. to 100%)	20.60
	Mineral Oil (Carnation White Mineral Oil)	6.00
	Silica (Cab-O-Sil M-5)	2.00
	Kaolin	5.00
	D&C Red #6 (Ca Lake C19-022)	2.10
	D&C Red #30 (Talc Lake C37-5290)	0.40
	Antimicrobials	q.s.
	Antioxidant	q.s.
B.	Polybutene (Indopol H-100)	35.00
	Acetylated Lanolin (Modulan)	18.60
	Mineral Oil (Carnation White Mineral Oil)	6.00
	Ozokerite Wax (Ozokerite Wax White 77W)	2.00
C.	Cloisonne' Monarch Gold 233X	2.30
D.	Fragrance	q.s.

- I. Add Phase A ingredients to a heated vessel equipped with a homogenizer. II. Raise temperature to 75+-5C and homogenize Phase A for 30 minutes until smooth. III. Add Phase B ingredients to Phase A, maintaining temperature at 75+-5C and agitating with a marine type mixer. IV. When the Ozokerite Wax has melted and product is uniform, add Phase C ingredients and mix an additional 15 minutes. V. Add Phase D and mix with constant stirring. VI. Cool to 40+-5C and fill into containers. Note: If iron oxide or organic pigments are used, they should first be dispersed in mineral oil; the mixture should then be milled in either a colloid or roller mill.

Formulation CLL-920052

Medium Lipstick

Phase:	Ingredients:	%wt.
A.	Carnauba Wax	13.70
	Beeswax	8.50
	Isopropyl Myristate	30.00
	Castor Oil (q.s. to 100%)	32.80
	Antioxidant	q.s.
	Antimicrobials	q.s.
B.	Gemtone Garnet G009	10.50
	Gemtone Goldstone G0014	4.50
C.	Fragrance	q.s.

- I. Weigh all the ingredients in Phase A into a heated vessel and raise temperature to 85+-3C, stirring until melted and uniform. II. Add in Phase B and mix until all the pearl pigment is well dispersed. III. Add in Phase C and mix with constant stirring. IV. Pour at 75+-5C. V. Mold, cool and flame the lipsticks.

Note: If iron oxide or organic pigments are used, they should first be dispersed in Castor oil; this mixture should then be milled in either a colloid or roller mill.

SOURCE: The Mearl Corp.: Formulation CLL-921945

Lip Gloss

This lip gloss imparts a rich, supple and moist appearance to the lips. Ritalan C contributes excellent lubricating and emollient qualities, as well as facilitating pigment dispersion.

<u>Ingredients:</u>	<u>% W/W</u>
1. Lanolin	46.60
2. Distilled Water	20.00
3. Ritalan C	10.00
4. Ozokerite	+4.00
5. Pigment	2.00
6. Propylparaben	0.10
7. Methylparaben	0.10
8. Allantoin	0.20
9. Pearl	12.00
10. Octyl Palmitate	5.00
11. Fragrance	QS

Compounding Procedure:

Add item 1 into a container and heat to 70-75C. Begin stirring and add item 2. Mix until the water is thoroughly dispersed and add the remaining ingredients with the exception of the fragrance, while stirring continuously. Maintain the temperature at 70-75C until the blend is completely homogeneous. Cool to 50-55C and add the fragrance. Package fill into suitable containers while stirring continuously.

Formulation HB-89-L-22

Lip Balm with Shebu

This formulation applies smoothly and evenly, without leaving a greasy residual feel. Shebu has been included for its natural factor-related lubricating and conditioning properties. The formulation assists in the alleviation of rough, dry, chapped lips.

<u>Ingredients:</u>	<u>% W/W</u>
1. Petrolatum	67.00
2. Mineral Oil	10.00
3. Paraffin Wax	5.00
4. Carnauba Wax	9.00
5. Ritaderm	4.00
6. Shebu	5.00
7. Color, Fragrance and Preservatives	QS

Compounding Procedure:

Combine items 1-6 and heat to 83C. Mix until uniform. Cool to 45C and add remaining ingredients.

Formulation HB-89-S-7

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Lip Pot

This formulation applies smoothly and evenly and imparts a rich, supple and moist appearance to the lips.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. White Petrolatum	86.00
2. Lanolin, Extra Deodorized	3.50
3. Pationic CSL	3.50
4. Lecithin (refined, cosmetic)	1.00
Part B:	
5. Distilled Water	5.70
6. d-Panthenol	0.30
Part C:	
7. Camphor	QS

**Compounding Procedures:**

Heat Part A and Part B to 165F. Add Part B to Part A with agitation. Maintain temperature for 10 minutes. Cool to 140F. Add Part C, if desired. Cool to 130F. Pour into containers.

Formulation 103-80

Lip Pot

This formulation applies smoothly and evenly and imparts a rich, supple and moist appearance to the lips.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. White Petrolatum	83.00
2. Lanolin, Extra Deodorized	3.50
3. Pationic CSL	3.50
4. Lecithin (Refined, cosmetic)	1.00
5. Patlac IL	1.00
Part B:	
6. Distilled Water	5.70
7. d-Panthenol	0.30
Part C:	
8. Camphor	1.00
9. Aloe Vera Extract	1.00

**Compounding Procedures:**

Heat Part A and Part B to 165F. Add Part B to Part A with agitation. Maintain temperature for 10 minutes. Cool to 140F. Add Part C and cool to 120F, pour into containers.

Formulation 103-82

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Liposome Eye Treatment

<u>Ingredients:</u>	<u>% by weight</u>
Dermasome RP (Vitamin A liposome)	3.00
Dermasome TRF (Biodynes TRF liposome)	3.00
Carbopol 1342	0.50
Finsolv TN (C12-C15 Benzoate)	2.00
Glycerine	2.00
Brookswax D	1.00
AMP-95	0.40
Germaben 2	1.00
Fragrance	0.10
Water	87.00

Procedure:

Disperse Carbopol. Heat to 70C, add Brookswax and Finsolv, Glycerine, Germaben. Neutralize. Cool to 40C. Add fragrances and Dermasomes with gentle agitation.

Formulation PF-0154 suggested by ChemMark Development, Inc.

Detergent Cleansing Gel

<u>Ingredients:</u>	<u>% by weight</u>
Carbomer 1342	2.00
Homogeneous 30 (cocoamidopropyl betaine)	20.00
Coconut diethanolamide	2.00
Crovol PK70 (palm kernel oil PEG-45 complex)	2.00
Tris Amino [Tris(hydroxymethyl)aminomethane]	to pH 6.0
Water, deionized	to 100.00
Preservatives, perfume, color	q.s.

Procedure:

Hydrate Carbopol in hot water (65-70C). Neutralize pH to 6.0. Add remaining ingredients (perfume predissolved in Crovol) and stir until homogeneous.

Formulation PF-0155 suggested by B.F. Goodrich

SOURCE: Angus Chemical Co.: Suggested Formulations

Lipstick

This smooth, creamy-textured lipstick applies easily and uniformly, providing excellent coverage. It helps to keep the lips lubricated and supple.

<u>Ingredients:</u>	<u>% W/W</u>
1. Ozokerite	4.00
2. Carnauba Wax	3.70
3. Candelilla Wax	4.80
4. Shebu	8.00
5. Ritalan	35.00
6. Propylparaben	0.05
7. Supersat	10.00
8. BHA	0.10
9. Forlan L	2.00
10. Ritaderm	1.00
11. Color Pigments	2.50
12. Titanium Dioxide	0.50
13. Castor Oil	17.35
14. Ritasol	2.00
15. Pearl	9.00

**Compounding Procedure:**

Weigh and add items 1-10 into a container and begin stirring and heating the blend to 75-78C while continuing to stir. (An agitator equipped with a stirrer capable of imparting relatively high shear stress is recommended.) In another container weigh and add items 11-14. Pass the blend twice through a 3 roll mill and add to the Forlan L - Ritaderm - containing mixture. Bring temperature to 75-78C, and add the remaining ingredients. Cool to 68-70C while stirring continuously. Pour into suitable molds.

Formulation HB-89-S-4

Lip Moisturizer Stick

This formulation applies easily and smoothly and leaves the lips soft, smooth and supple. Ritaderm has been added for its lipid layer and natural moisturizing factor contributions.

<u>Ingredients:</u>	<u>% W/W</u>
1. Ozokerite	4.50
2. Carnauba Wax	9.50
3. Shebu	9.00
4. Ritalan	30.00
5. Ritaderm	10.00
6. Octyl Palmitate	14.55
7. Castor Oil	10.00
8. Supersat	10.00
9. Fragrance	2.30
10. Propylparaben	0.10
11. BHA	0.05
12. Color	QS

**Compounding Procedure:**

Weigh all ingredients into a suitable container, omitting the fragrance, and heat while stirring to approximately 85C. When all ingredients have melted, begin cooling the batch. Cool to approximately 55C, add the fragrance, stir continuously and pour into suitable molds.

Formulation HB-89-S-3

SOURCE: R.I.T.A. Corp.: Suggested Formulations

**Lipstick "Elnace" With Sunscreen**

This lipstick formulation is suitable for use in a slender-swivel up case. The lipstick has a chisel shape and allows fine outlining of the lips as well as coating of the entire lip.

<u>Phase:</u>	<u>Ingredients:</u>	<u>%wt.</u>
A.	Candelilla Wax	8.90
	Beeswax	12.40
	Diisopropyl Adipate (Schercemol DIA)	13.50
	Isopropyl Lanolate (Amerlate P)	13.50
	Isostearyl Alcohol (Adol 66)	14.00
	Castor Oil (q.s. to 100%)	14.73
	Octyl Methoxycinnamate (Parsol MCX)	3.00
	Ozokerite Wax	5.10
	Iron Oxide (Brown C33-115)	0.37
	Antioxidant	q.s.
	Antimicrobials	q.s.
B.	Cloisone' Super Copper 350Z	8.00
	Gemtone Tan Opal G005	6.50
C.	Fragrance	q.s.

**Procedure:**

I. Weigh all the ingredients in Phase A into heated vessel. Heat to 85+/-5C and stir until melted and uniform. II. Stir in Phase B and mix slowly until all the pearl pigment is well dispersed and no air bubbles form on the surface. III. Add Phase C and mix with constant stirring. IV. Mold, cool and flame the lipsticks.

Note: If iron oxide or organic pigments are used, they should first be dispersed in Castor oil; this mixture should then be milled in either a colloid or roller mill.

Formulation CLL-910152

**Firm Lipstick**

<u>Phase:</u>	<u>Ingredients:</u>	<u>%wt</u>
A.	Candelilla Wax	11.50
	Beeswax	15.00
	Isopropyl Lanolate (Amerlate P)	15.00
	Isostearyl Alcohol (Adol 66)	14.00
	Diisopropyl Adipate (Schercemol DIA)	13.50
	Castor Oil (q.s. to 100%)	16.00
	Antioxidant	q.s.
	Antimicrobials	q.s.
B.	Cloisone' Super Copper 350Z	6.00
	Cloisone' Cerise Flambe' 550Z	9.00
C.	Fragrance	q.s.

**Procedure:**

I. Weigh all the ingredients in Phase A into a heated vessel and raise temperature to 85+/-3C, stirring until melted and uniform. II. Add in Phase B and mix until all the pearl pigment is well dispersed. III. Add in Phase C and mix with constant stirring. IV. Pour at 75+/-5C. V. Mold, cool and flame the lipsticks. Note: If iron oxide or organic pigments are used, they should first be dispersed in Castor oil; this mixture should then be milled in either a colloid or roller mill.

Formulation CLL-921943

SOURCE: The Mearl Corp.: Suggested Formulations



Liquid Eye Liner

<u>Phase:</u>	<u>Ingredients:</u>	<u>Percent by Weight</u>
1	Oleic acid	1.25
	Stearic acid	1.25
	Tween 20	0.20
	Arlacel 20	0.20
	Lexemul P	2.50
	Lexemul 515	2.50
2	Deionized water	36.65
	Antifoam AF emulsion	0.05
	Methylparaben	0.20
	Ethylparaben	0.15
	Phenoxyethanol	0.50
	Versene 100 (EDTA)	0.10
3	Deionized water	29.00
	PVP	4.00
4	Propylene glycol	5.00
	Veegum	0.50
	Methocel 40-202	0.20
5	Ultramarine blue	10.00
6	Deionized water	1.00
	TEA	0.70
7	Timica pearlwhite	3.00
8	Deionized water	1.00
	Dowicil 200 preservative	0.05

**Procedure:**

1. Weigh ingredients in oil phase (Phase 1) into a clean auxiliary compounding kettle equipped with a mixer. Heat to 82C.
2. Weigh water (Phase 2) into main compounding kettle equipped with a colloid mill. Slowly add pigment (Phase 5) and mill until all pigments are completely dispersed.
3. Add Phase 4 (which has been previously dispersed) and mill until smooth.
4. Add Phase 6 and previously dispersed Phase 3. Mill for 5 minutes and turn off mill. Heat water phase to 80C with mixing.
5. With water phase at 80C, add oil phase at 82C and mix 10 minutes. Start to cool.
6. When batch reaches 60C, slowly add Phase 7 and continue mixing.
7. When batch reaches 45C, add Phase 8 and mix batch to room temperature.

**SOURCE:** Dow Chemical Co.: Suggested Formulation

**Liquid Eyeliner**

This fluid emulsion eyeliner uses Mearl's Flamenco Twilight Green to impart a subtle, smokey effect to the eyelid. It is suitable for filling into automatic containers.

<u>Phase:</u>	<u>Ingredients:</u>	<u>%wt.</u>
A.	Water (q.s. to 100%)	65.20
	Magnesium Aluminum Silicate (Veegum)	1.00
B.	Triethanolamine (TEA 99%)	1.40
	Propylene Glycol	8.00
C.	Xanthan Gum (Keltrol T)	0.30
	Antimicrobial (water soluble)	q.s.
D.	Flamenco Twilight Green 820CB	15.00
	Mearlmica CF	5.00
E.	Stearic Acid	2.80
	Glyceryl Stearate (Aldo MSC)	0.80
	Oleyl Alcohol (Novol)	0.50
	Antimicrobial (oil soluble)	q.s.
I. Disperse Veegum into Water using high shear mixing until smooth. II. Add Phase B to Phase A, mixing until thoroughly dispersed. III. Add Phase C to Phase A-B and mix until smooth.		
IV. Blend Phase D and add to Phase A-B-C with gentle agitation and heat to 75+-5C. V. In a support vessel heat Phase E ingredients to 75+-5C with gentle agitation. VI. Add Phase E to Phase A-B-C-D with gentle agitation, maintaining temperature at 75+-5C. VII. Maintain constant agitation and cool to 35+-5C; store or fill into appropriate containers.		
Formulation CLR-92119		

**Sheer Satin Pressed Powder Eyeshadow**

An eye shadow of exceptional softness and subtle iridescence.

<u>Phase:</u>	<u>Ingredients:</u>	<u>%wt.</u>
A.	Mearltalc TCA (q.s. to 100%)	18.00
	Mearlmica SVA	20.00
	Magnesium Myristate	5.00
	Silica (Spherica P-1500)	2.00
	Cloisone' Super Red 434Z	20.00
	Cloisone' Violet 525C	13.00
	Cloisone' Nu-Antique Blue 626CB	2.00
	Cloisone' Cerise Flambe' 550Z	2.00
	Antimicrobials	q.s.
B.	Octyl Palmitate (Ceraphyl 368)	7.00
	Isostearyl Neopentanoate (Ceraphyl 375)	1.00
	Antioxidant	q.s.
C.	Cloisone' Super Red 434Z	5.00
	Cloisone' Violet 525C	5.00
I. Thoroughly blend and disperse Phase A in appropriate dry blending/dispersing equipment. II. Add Phase B ingredients into a support vessel. Heat and mix until uniform. III. Spray Phase B into premixed Phase A and continue blending. IV. Pulverize and return to blender. V. Add Phase C to Phase A-B and mix until uniform.		
Formulation CLE-92276		

SOURCE: The Mearl Corp.: Suggested Formulations

Liquid Frosted Blusher

<u>Phase:</u>	<u>Ingredients:</u>	<u>Percent by Weight</u>
1	Stearic acid	3.00
	Lexemul P	2.00
	Lexemul 515	1.00
	Candelilla wax	1.00
	Dow Corning 200	0.50
	Carnation oil	6.00
	Myristyl Myristate	2.00
	Propylparaben	0.10
2	Deionized water	62.05
	Titanium dioxide	6.00
	Red iron oxide 3098	1.30
3	Deionized water	2.00
	Triethanolamine	1.50
	Versene 100 (EDTA)	0.10
	Antifoam AF emulsion	0.05
4	Propylene glycol	5.00
	Methocel 40-202	0.20
	Veegum	0.50
	Phenoxyethanol	0.50
	Methylparaben	0.20
5	Timica Pearlwhite	5.00

**Procedure:**

1. Weigh all materials in Phase 1 into a clean auxiliary compounding kettle equipped with a mixer. Heat to 82C with mixing.
2. Weigh water (Phase 2) into main compounding kettle equipped with a colloid mill. Slowly add pigments, milling until completely dispersed. Start adding Phase 4 dispersion which has been previously mixed. Mill until smooth. Add Phase 3 mixture and mill for 5 minutes. Turn off mill and drain into batch.
3. Start heating milled water phase to 80C. With oil phase at 82C and water phase at 80C, slowly add oil to water with moderate mixing.
4. Mix batch at 80C until a homogeneous emulsion is formed. Mix ten minutes more then start to cool.
5. Mix to room temperature.

**Note:**

When mixing frosted shades, add Phase 5 (Timica Pearlwhite) to batch during cooling phase in step 3 when batch is between 60-65C.

**SOURCE:** Dow Chemical Co.: Suggested Formulations

Liquid Make-Up

<u>Phase</u>	<u>Ingredients:</u>	<u>Percent by Weight</u>
1	Stearic acid	2.50
	Lexemul P	2.00
	Cerephyl 424	1.00
	Dow Corning 200	0.50
	Mineral oil	10.00
2	Deionized water	61.70
	Titanium dioxide	10.50
	Mapico yellow	1.70
	Red iron oxide 3098	0.70
	Black iron oxide	0.30
3	Propylene glycol	5.00
	Veegum	0.50
	Methylparaben	0.20
	Ethylparaben	0.10
	Methocel 40-202	0.20
4	Deionized water	1.00
	Triethanolamine	1.00
5	Deionized water	1.00
	Dowicil 200 preservative	0.05
	Versene 100 (EDTA)	0.05

**Procedure:**

1. Weigh all materials in Phase 1 into a clean auxiliary compounding kettle equipped with mixer. Heat to 82°C with mixing.
2. Weigh water in Phase 2 into main compounding kettle equipped with a colloid mill. Slowly add pigments and mill until completely dispersed.
3. Blend the ingredients in Phase 3 completely. Add Phase 3 to the dispersed pigment phase (Phase 2) and mix until smooth. Add Phase 4 and mix until smooth. Mill for 5 minutes.
4. Heat aqueous phase to 80°C with mixing.
5. When water phase reaches 80°C, start adding oil at 82°C slowly to water phase. When all the oil phase has been added to water phase, continue mixing maintaining 80°C temperature. Mix ten minutes.
6. Begin to cool batch.
7. At 45°C add Phase 5 which has been previously blended.
8. Cool batch to room temperature with mixing. Allow batch to sit several hours to reach proper viscosity before filling.

**SOURCE:** Dow Chemical Co.: Suggested Formulation

Liquid Make-up

A light, sheer foundation with excellent "play-time" and smooth after-feel. The Mearlmaid AA imparts a subtle opalescent look to both skin and bottle tones.

Phase:	Ingredients:	%wt.
A.	Mineral Oil (Carnation White Mineral Oil)	4.50
	Mineral Oil (and) Lanolin Alcohol (Amerchol L-101)	4.50
	Stearic Acid (Emersol 120)	2.20
	Glyceryl Stearate (Arlacel 129)	1.80
	Isopropyl Lanolate (Amerlate P)	0.90
	Isostearic Acid (Emersol 871)	0.50
	Antimicrobial (oil soluble)	q.s.
B.	Water (q.s. to 100%)	50.20
	Propylene Glycol	4.50
	Triethanolamine (TEA 99%)	0.90
	Antimicrobial (water soluble)	q.s.
C.	Titanium Dioxide	2.00
	Iron Oxide (C33-115 Cosmetic Brown)	0.20
	Talc (Supra A Talc)	7.80
D.	Mearlmaid AA	10.00
	Water	10.00

Procedure:

- I. Heat Phase A to 85C+/-3C while mixing until completely uniform.
  - II. Heat Phase B to 85C+/-3C while mixing. III. Pulverize Phase C and add to Phase B using high shear mixing until smooth.
  - IV. Add Phase C-B to Phase A maintaining constant agitation and cool batch to 35+/-5C. V. Add pre-mixed Phase D to Phase A-B-C with gentle agitation while mixing until completely uniform. VI. Store or fill into appropriate containers.
- Formulation CLF-921084

Earthtone Make-up Powder

This reddish-brown "earthtone" powder has a subtle luster, smooth feel, good coverage, and is intended for a wide variety of make-up applications.

Phase:	Ingredients:	%wt.
A.	Talc (Cyprus Supra) (q.s. to 100%)	27.30
	Iron Oxide (C33-5138 Cosmetic Russet)	27.30
	Antimicrobial	q.s.
	Shinju White 100T	27.30
	Cloisonne' Imperial Gold 222X	9.10
B.	Mineral Oil (Ervol-125/135 SUS)	4.50
	Isopropyl Myristate	4.50
	Fragrance	q.s.

Procedure:

- I. Thoroughly blend and disperse Phase A in appropriate dry blending/dispersing equipment. II. Blend Phase B ingredients until uniform. III. Spray Phase B into pre-mixed Phase A and continue blending. IV. Pulverize and store.
- Formulation CLF-920026

SOURCE: The Mearl Corp.: Suggested Formulations

Long Wearing Creamy Lipstick

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Castor Oil	50.05
Octyl Stearate (Tegosoft OS)	3.00
Cetyl Dimethicone (Abil Wax 9801)	1.00
Mineral Oil	9.00
Candelilla Wax	4.35
Carnauba Wax	3.00
Ozokerite	3.00
C24-28 Alkyl Methicone (Abil Wax 9810)	3.15
Behenoxy Dimethicone (Abil Wax 2440)	2.00
Lanolin Alcohol	3.00
BHA	0.05
Phase B:	
Pigments	3.00
Cetyl Dimethicone (Abil Wax 9801)	0.40
Castor Oil	4.00
Phase C:	
Titanium Dioxide (and) Mica	11.00
Phase D:	
Fragrance	Q.S.

Procedure:

Melt part A together at 80C. Mix. Grind the pigments of Phase B into the oils and waxes of Phase B using a triple roll mill. Add to Phase A. Mix at 80C. Add Phase C. Cool to 55C. Add fragrance. Mold.

SOURCE: Goldschmidt Chemical Corp.: Suggested Formulation

Lipstick Base

<u>Ingredient:</u>	<u>Wt. %</u>
Methyl Stearoxy Dimethicone	Masilwax 135 4.75
Candelilla Wax	Synthetic Candelilla 11.80
Beeswax	White Beeswax, NF 3.60
Ozokerite	White Ozokerite Wax 77W 2.80
Paraffin	Refined Paraffin 130/135 2.20
Carnauba Wax	#1 Yellow Carnauba 1.00
Isopropyl Myristate	Lexol IPM 10.30
Lanolin	Deodorized AAA Lanolin 4.80
Castor Oil	AA USP 58.60
Propyl Paraben	0.10
BHT	0.05

Procedure:

With gentle mixing, heat the above mixture to 80C. When uniform, fill into preheated molds.

Note: Pigments should be thoroughly milled into castor oil prior to blending the final lipstick.

SOURCE: PPG Industries, Inc.: Formulation S-101

Long Wearing Pressed Eyeshadow

The long wearing properties of this eye shadow are enhanced by the pigment dispersion.

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Talc, USP	48.50
Mica	15.00
Sericite	15.00
Zinc Stearate	1.50
Pigments (FD&C, D&C, Iron Oxides, Ultramarines, Titanium Dioxide)	15.00
Phase B:	
Cetearyl Isononanoate (Tegosoft CI)	0.40
Cetyl Dimethicone (Abil Wax 9801)	0.30
Stearoxy Dimethicone (Abil Wax 2434)	0.30
Mineral Oil	4.00
Fragrance, Preservatives	Q.S.

Procedure:

Mix all ingredients of Phase A in a blender. Combine the ingredients of Phase B and spray or slowly add to Phase A using a blender. Pulverize through a screen. Press into godets.

Gel Eye Makeup Remover

Firmer or softer gels can be made by adjusting the level of polyethylene.

<u>Ingredients:</u>	<u>% w/w</u>
Mineral Oil	82.0
Cetyl Dimethicone (Abil Wax 9801)	2.0
C24-28 Alkyl Methicone (Abil Wax 9810)	10.0
Polyethylene	6.0

Procedure:

Heat the Mineral Oil and Polyethylene to 70C. Mix until uniform. Add the Cetyl Dimethicone and C24-28 Alkyl Methicone. Cool to 50-55C and dispense into tubes or jars. Oil soluble colors can be added if desired.

SOURCE: Goldschmidt Chemical Corp.: Suggested Formulations

Low Alcohol Moisturizing Lotion

A moisturizing, low-alcohol, opaque lotion aftershave, which has a cooling, soothing skin-tightening feel with a substantive after-feel from the Patlac IL and Pationic ISL.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Acritamer 941 (2% Solution)	37.50
2. Distilled Water	44.86
Part B:	
3. Patlac IL	1.00
4. Ritapro 165	0.50
5. Pationic ISL	1.00
6. Cetyl Alcohol	0.50
7. Myristyl Lactate	1.00
Part C:	
8. Triethanolamine (50%)	0.64
9. Alcohol SD 40	12.00
Part D:	
10. Perfume, A.S. Type	1.00

Compounding Procedure:

NOTE: A sweep agitator is recommended for this product.

Weigh ingredients of Part A and Part B and heat to 165F.

Slowly add Part B to Part A, taking care not to entrap air.

Cool to 140F. Add Part C. Cool to 110F and add Part D. Adjust

pH to 5.3. Pour into containers.

Viscosity: Brookfield RVF Heliopath TA @ 10 rpm @ 27C:6460 cps

Formulation H-89-P-21

Shave Gel

This viscous shave gel has good foam, with low irritancy characteristics.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Distilled Water	63.68
2. Sodium Laureth Sulfate	16.67
3. Pationic 138C	10.00
4. Ritamid C	4.00
5. Ritapeg 150 DS	2.00
6. Titanium Dioxide	0.50
7. Polyox WSR 10	0.15
8. Methylparaben	0.10
Part B:	
9. Perfume	0.20
10. Glydant 40-700	0.20
Part C:	
11. Triethanolamine 50%	+2.00
12. Sodium Chloride (25% solution)	+0.50

Compounding Procedures:

Heat Part A to 165F while mixing. Neutralize to pH 7.5 with Triethanolamine. Cool to 120F, add Part B. Adjust viscosity with Sodium Chloride solution.

Formulation 103-176

SOURCE: R.I.T.A. Corp.: Suggested Formulations



Make-up Base

<u>Materials:</u>	<u>Part/Wt(%)</u>
Part A:	
Lanaetex 75	3.00
Myristyl Myristate	2.20
Dioctyl Sebacate	2.00
Dispersen G	2.00
Brij 56	0.10
Butyl Paraben	0.10
Part B:	
Water	68.25
Veegum HV	0.50
Keltrol	0.15
Glycerin	3.00
Citric Acid	0.30
Germaben II	0.60
Methyl Paraben	0.10
Part C:	
SS4267	3.00
SF1214	1.00
Talc	5.00
Titanium Dioxide	5.00
Iron Oxide	3.70

Procedure:

- 1) Heat Part A and Part B to 75C.
- 2) Add Part B to Part A with high shear mixing.
- 3) Cool to 55C and add Part C with good mixing.
- 4) Continue mixing until cooled to 25C.

Formulation CC100

Glitter Gel

<u>Materials:</u>		<u>Part/Wt(%)</u>
Part A:	(1)	(2)
Klucel HF	2.0	2.0
SF1188	2.0	---
SF-96-5	---	5.0
SD Alcohol 40B (200Pr)	94.0	90.0
Pale Gold Glitter (.004x.004x.001)	2.0	3.0

Procedure:

- 1) Add SD alcohol to tank, add Klucel HF and hydrate with mixing for one hour.
- 2) Set overnight for complete hydration.
- 3) Add remaining ingredients in order listed.

Comments:

Meadowbrook has a variety of textures of glitter.

For slower drying time, replace 10% of the SD alcohol with SF1202.

SOURCE: GE Silicones: Formulation SP105

**"Matte-Finished" Make-Up**

	<u>% Weight</u>
Phase A:	
Cetyl Octanoate (Schercemol CO)	7.00
Diisopropyl Dimerate (Schercemol DID)	1.00
Sorbitan Stearate (Arlacel 60)	3.00
Methyl Gluceth-20 Sesquistearate (Glucamate SSE 20)	3.00
Glyceryl Stearate (Schercemol GMS)	0.50
Dimethicone, 350 cps. (Dow Corning 200 Fluid)	1.00
Octyl Dimethyl PABA (Escalol 507)	1.00
Phase B:	
Magnesium Aluminum Silicate (Veegum Regular)	15.00
Water	55.00
Glycerin	2.00
Phase C:	
Pigments:	
Talc 141 BC	2.10
Titanium Dioxide 328	6.40
7055 Iron Oxide Yellow	0.45
7061 Iron Oxide Brown	0.80
7054 Iron Oxide Red	0.25
Phase D:	
Cucumber Extract	0.50
Germaben II	1.00
Procedure:	

Disperse Veegum slurry in water and uniform. Add rest of water phase mixing well. Mix Phase C. Add Phase C to Phase B and mix for 5 minutes or until fully dispersed. In main beaker mix ingredients of Phase A. Heat both Phase A and Phases B & C to 70C. Add Phase B & C to Phase A with moderate agitation. Cool batch to room temperature with continuous mixing, then add Phase D..

**Deep-Penetrating, Conditioning Mascara**

	<u>% Weight</u>
Water	87.95
Acrylates/C 10-30 Alkyl Acrylate Crosspolymer (Carbopol 1342)	1.00
Aminomethylpropanol	1.00
Quaternized Acetamide MEA (Quamectant AM-50)	2.50
Germaben II	1.00
Hydrolyzed Animal Protein (Hydrocoll EN-55)	1.00
Fragrance	0.05
Polysorbate-20	0.50
Panthenol (and) Soy Lecithin	5.00
Procedure:	

Disperse the Carbopol in 80% of batch water at room temperature. Neutralize with aminomethylpropanol. Dissolve Quamectant in remainder of water and add slowly to batch with slow sweeping agitation to avoid aeration. Add the Germaben and Hydrocoll with slow agitation. Pre-blend the fragrance and polysorbate-20 and add to batch. With slowest agitation, add the panthenol (and) soy lecithin.

SOURCE: Sutton Laboratories: Suggested Formulations

Moisturizer

This light, elegant moisturizer applies with a rich lubriciousness and dries to a soft, smooth, nontacky feel. Lexquat AMG-O is the primary cationic emulsifier with the added benefit of emolliency. This product may be used as a day moisturizer, a hand and body cream, or a baby cream.

	<u>%(w/w)</u>
Phase A:	
Deionized water	66.30
Cellose QP-15000H	0.90
Glycerine	3.00
Propylene Glycol USP	2.00
Lexgard M	0.20
Lexgard AMG-O	6.30
Phase B:	
Lexol PG-900	15.00
Lexemul 55G	2.00
Myristyl Myristate	1.00
Stearyl Alcohol	2.00
Cetyl Alcohol	1.00
Lexgard P	0.10
Phase C:	
Fragrance	0.20

Procedure:

Charge batch vessel with water and begin mixing and heating to 78C+2C. Dust in cellose. When completely hydrated add remainder of phase A materials. Combine phase B and heat to 78C+2C. When uniform slowly add phase B to phase A maintaining mixing and temperature. Allow to mix 15 min. at 78C. Cool to 40C and add phase C to batch. Cool to room temperature.

Observations:

pH (direct): 3.2-3.8

Viscosity @ 25C: 30,000 cps

SOURCE: Inolex Chemical Co.: Formulation SK-100

Moisturizing Gel

<u>Ingredients:</u>	<u>% by weight</u>
A. Water	89.20
Glycerin	7.00
Sorbitol, 70%	3.00
Oxaban-A	0.10
B. Carbomer 980 (Carbopol 980)	0.50
C. AMP-95	0.20

Procedure:

Combine A. With rapid agitation, slowly add B. Mix until a uniform dispersion is obtained - usually about 20 minutes. Add C.

SOURCE: Angus Chemical Co.: Formulation PF-0220

Moisturizer with Sun Screen

This general-purpose skin care product is for daily use.

<u>Materials:</u>	<u>Part/Wt(%)</u>
Part A:	
Petrolatum	0.88
Cetyl Alcohol	0.88
Stearic Acid	0.88
PEG-8 Stearate	0.88
Arlacel 165	0.44
SF-96-100	0.29
Finesolv TN	1.54
Lecithin	0.88
Tenox-6	Q.S.
Part B:	
Water	82.42
Carbopol 940	0.23
Disodium EDTA	0.05
Methyl Paraben	0.22
Part C:	
Octyl Methoxy Cinnamate	3.60
SS4267	2.22
SF1204	4.50
Part D:	
Sodium Hydroxide	0.09

Procedure:

- 1) Heat Part A and Part B to 80C.
- 2) Add Part A to Part B with mixing.
- 3) Continue to agitate while cooling to 50C.
- 4) In a separate vessel, slurry Part C.
- 5) Add Part C to the main batch.
- 6) Homogenize in a colloid mill or homogenizer at 5000 psi.  
Cool to 30C with agitation.
- 7) Add Part D to adjust pH (target pH 5.3) and homogenize.  
Force cool if needed to 25C.

Comments:

Part D may be added at 60C or below before the addition of Part C.

If the SPF is increased with benzophenone-3, slurry it separately with SS4267. This procedure increases the water resistance of the sunscreen in the formulation.

Preservative effect may be increased by using 0.8% Germaben II-E (and target pH at 4.9)

SOURCE: GE Silicones: Formulation SP103

Multi-Protective Skin Moisturizer (Cationic)

	<u>% Weight</u>
Phase A:	
Cetyl Alcohol	2.00
Mineral Oil (Drakeol 7)	3.00
Petrolatum	1.00
Tridecyl Neopentanoate (Trivent NP-13)	2.50
Dimethicone Copolyol (Abil 88852)	1.00
Glyceryl Stearate (and) Laureth-23 (Cerasynt 945)	1.00
Dimethicone, 350 cps. (Dow Corning 200 Fluid)	0.20
Tocopheryl Acetate (Vitamin E Acetate)	0.20
Steareth-21 (Brij 721)	1.00
Phase B:	
Water	70.90
Stearamidopropyl PG-Dimonium Chloride Phosphate (Monoquat P-TS)	2.00
Allantoin	0.50
Aloe Vera Gel 1:1	5.00
Polyquaternium-10 (Celquat SC-240)	0.50
Propylene Glycol	4.00
Aluminum Starch Octenylsuccinate (Dry Flo-C)	4.00
Phase C:	
Germaben II-E	1.00
Phase D:	
Fragrance	0.20

**Procedure:**

Heat water, Monoquat and Allantoin to 50C. Add Celquat SC-240, disperse thoroughly and heat to 80C. Prepare propylene glycol and Dry Flo-C slurry and add to water phase. Mix Phase B and heat to 80C. Add Phase B to Phase A at 80C and mix for 15 minutes. Cool to 35C and add Phase C and Phase D to it. Cool to room temperature and homogenize.

Conditioning Facial Cleanser

	<u>% Weight</u>
Water	43.50
Citric Acid, 50% Solution	0.30
Sodium Laureth Sulfate (1 Mole, 25%)	35.00
Diammonium Lauryl Sulfosuccinate (Monamate LNT-40)	5.00
Trisodium Lauroampho PG Acetate Phosphate Chloride (Phosphoteric QL-38)	8.00
Cocamphopropyl Betaine (Monamate CAB-LC)	8.00
Germaben II	0.20

**Procedure:**

Blend ingredients in order listed, readjusting pH if necessary to 5.5-6.0.

**SOURCE:** Sutton Laboratories; Suggested Formulations

**Natural Cleanser**

An all natural, low foaming cleanser with excellent after-feel

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Distilled Water	75.70
2. Patlac NAL	0.50
3. Pationic 138C	8.00
4. Pationic 122A	2.00
5. Corn Oil	8.00
6. Ritapag 150 DS	0.50
7. Rita EGDS	3.00
8. Methylparaben	0.20
9. Propylparaben	0.10
10. Supersat AWS 4	2.00
Part B:	
11. Perfume	QS
12. Parlac LA (44%)	QS
13. Sodium Chloride (25% Solution)	QS

**Compounding Procedure:**

Heat Part A to 165F with mixing. Mix until uniform. Begin cooling. Cool to 120F. Add perfume. Mix until uniform, avoid aeration. Cool to 90F. Adjust pH with Patlac LA (44%) to 5.70+-0.2. Adjust viscosity with sodium chloride 25% solution. Formulation 105-46

**Water-in-Oil Emulsion Base**

This water-in-oil emulsion is smooth and non-greasy.

<u>Ingredients:</u>	<u>% W/W</u>
Part A-Oil Phase:	
1. Mineral Oil 80/90	21.00
2. Pationic CSL	7.20
3. Pationic ISL	0.80
4. Ritahydrox	0.50
5. Methylparaben	0.10
6. Propylparaben	0.05
7. Kathon CG	0.05
Part B-Water Phase:	
8. Glycerin	5.00
9. Distilled Water	65.30

**Compounding Procedures:**

Combine ingredients of Part A and heat to 72C. Combine ingredients of Part B, heating to 72C. Add Part B to Part A while stirring. Continue to stir to room temperature.

Formulation 103-166

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Nongreasy Body Oil

A light, nongreasy, yet very effective body oil for very dry skin. It spreads easily, and absorbs quickly, leaving skin smooth and soft.

<u>Ingredient:</u>		<u>Wt. %</u>
Tetrabutoxypropyl Methicone	Masil 756	4.0
PPG-10 Butanediol	Macol 57	6.0
Cyclomethicone	Masil SF-V	80.0
SD Alcohol 40B		10.0
Fragrance		Q.S.

Appearance: Clear, water-white fluid

Properties:

Blend all ingredients together at room temperature.

Formulation L-103

Emollient Body Oil

<u>Ingredient:</u>		<u>Wt. %</u>
Isopropyl Palmitate	Propal	45.0
Cyclomethicone	Masil SF-V	5.0
PEG 7 Glyceryl Cocoate	Macol 159	25.0
SD Alcohol 40B		24.5
Fragrance		0.5

Appearance: Clear, straw-colored liquid

Performance: A light, quick-spreading emollient which leaves a smooth, non-greasy skin after-feel.

Procedure:

Blend all ingredients at room temperature.

Formulation L-101

SOURCE: PPG Industries, Inc.: Suggested Formulations

Perfume Gel

<u>Ingredients:</u>	<u>% by weight</u>
A. Carbomer 980	1.00
Water, distilled	51.00
B. Tris Amino	1.40
Water, distilled	12.55
Disodium EDTA	0.05
C. Cremophor RH 40	5.00
Perfume oil	4.00
Ethanol 96%	25.00

Procedure:

Part A: Disperse Carbomer 980 in water.

Part B: Dissolve Tris Amino and EDTA in water.

Part C: Dissolve Cremophor and perfume oil in ethanol. Add C to A. Add B to C and A.

Formulation PF-0192E

Placenta Gel

(For use on aging skin)

<u>Ingredients:</u>	<u>% by weight</u>
A. Ethanol, 96%	15.00
Water, distilled	50.00
Carbomer 1382	1.00
B. Water, distilled	18.15
Glycerol or 1,2-propylene glycol	10.00
Tris Amino	0.80
Disodium EDTA	0.05
C. Placenta liquid	5.00
Perfume oil	q.s.

Procedure:

Part A: Disperse Carbomer 1382 in water. Add the alcohol.

Part B: Dissolve Tris Amino and EDTA in water and mix with glycerol. Stir B slowly into A.

Part C: Stir placenta liquid slowly into the finished gel. Add fragrance.

Formulation PF-0191E

SOURCE: Angus Chemical Co.: Suggested Formulations



Poured Eyeshadow

A hot pour eye shadow formulation suitable for direct filling into compacts. The product has a unique powdery feel when applied on the skin.

Phase:	Ingredients:	% wt.
A.	Isopropyl Myristate (q.s. to 100%)	20.40
	Mineral Oil (Carnation)	10.00
	Lauryl Lactate	10.00
	Ozokerite Wax	8.00
	Carnauba Wax	4.00
	Dimethicone (Dow Corning 200 Fluid-350 cs.)	4.00
	Antimicrobials	q.s.
	Antioxidants	q.s.
	Mearlmica SVA	14.60
	Timica Silkwhite 110W	2.00
B.	Cloisone' Supergreen 827C	6.00
	Silica (Spherica P-1500)	15.00
	Corn Starch	2.00
	Ferric Ammonium Ferrocyanide (C38-5410	
	Cosmetic Blue F)	2.70
	Iron Oxide (C33-5410 Cosmetic Yellow)	1.30

Procedure:

- I. Add Phase A ingredients to a heated vessel and stir bringing temperature to 80+-3C.
- II. Pulverize Phase B ingredients and add to Phase A with thorough agitation.
- III. Pour into holding kettles or appropriate compacts.

Typical Properties:

Color: Green to match standard  
 Appearance: Pearly to match standard  
 Capillary Point: 67+-3C  
 Formulation CLE-911016B

Frosted Pressed Powder Eyeshadow

This formulation provides a pressed powder eyeshadow that has a very smooth feel, excellent pay-off and wear, and is quite resistant to breakage.

Phase:	Ingredients:	% wt.
A.	Talc (q.s. to 100%)	17.00
	Zinc Stearate	8.00
	Kaolin	8.00
	Gemtone Tan Opal G005	10.00
	Timica Sparkle 110P	30.00
	Antimicrobials	q.s.
B.	Antioxidants	q.s.
	Mineral Oil (Ervol)	7.00
C.	Gemtone Tan Opal G005	20.00

Procedure:

- I. Thoroughly blend and disperse Phase A in appropriate dry blending/dispersing equipment. II. Add Phase B ingredients into a support vessel. Heat and mix until uniform. III. Spray Phase B into premixed Phase A and continue blending. IV. Pulverize and return to blender. V. Add Phase C to Phase A-B and mix until uniform.

SOURCE: The Mearl Corp.: Formulation CLE-911036

**Pressed Lip Powder**

This formulation produces a lip powder cake which applies easily, blends well and has excellent luster and wear characteristics. No drying out of the lips was experienced in normal use.

<u>Phase:</u>	<u>Ingredients:</u>	<u>%wt.</u>
A.	Talc (q.s. to 100%)	34.30-44.30
	D & C Red #30, Al Lake (C37-038 Permanent Pink)	2.17
	Titanium Dioxide (Cosmetic White C47-056)	2.17
	Nylon-12 (Orgasol 2002 Natural Cos)	0.50
	Antimicrobials	q.s.
	Fragrance	q.s.
B.	Duochrome RY (Red/Gold) 224C	15.00
	Flamenco Ultra Silk	10.55
	Cloisonne' Monarch Gold 233X	5.43
C.	Liquid Binder*	20.00-30.00

**\*Liquid Binder:**

Hydrogenated Lanolin (Ohlan)	21.00
Isopropyl Myristate	21.00
Petrolatum (Penreco Snow White)	20.90
Isopropyl Lanolate (Amerlate P)	20.90
Dimethicone (Dow Corning 200 Fluid)	2.70
Octyl Stearate	8.50
Octyldodecanol (Standamul G)	5.00
Antioxidant	q.s.

- I. Blend ingredients in Phase A, pulverize and return to blender. II. Add ingredients in Phase B to Phase A and blend until uniform. III. Melt, add and disperse pre-mixed Phase C to pre-mixed Phase A-B. IV. Pulverize entire batch without screen and store.  
Formulation CLL-921971

**Lip Gloss with Sunscreen**

This highly pigmented lip gloss yields a shiny, smooth, creamy product that is easy to apply, wears well and helps protect the lips.

<u>Phase:</u>	<u>Ingredients:</u>	<u>% wt.</u>
A.	Castor oil (q.s. to 100%)	64.80
	C18-36 Acid Glycol Ester (Syncrowax ERLC)	3.70
	Cetyl Alcohol (Adol 52)	1.60
	Octyl Methoxycinnamate (Parsol MCX)	3.00
	D&C Red #30 (Al Lake C37-038)	1.20
	Iron Oxide (C33-8073 Cosmetic Yellow)	0.30
	Antioxidant	q.s.
	Antimicrobials	q.s.
B.	Flamenco Ultra Silk	10.40
	Flamenco Super Red 430Z	15.00
C.	Fragrance	q.s.
I.	Weigh all the ingredients in Phase A into a heated vessel and raise temperature to 75+-5C, stirring until melted and uniform	
II.	Add Phase B ingredients to Phase A maintaining temperature at 75+-5C. III. Add Phase C and mix with constant stirring.	
	Note: If iron oxide or organic pigments are used, they should first be dispersed in castor oil; this mixture should then be milled in either a colloid or roller mill.	

SOURCE: The Mearl Corp.: Formulation CLL-921972

Shebu Lip Moisturizer

The formulation given here is in the form of a solid "stick". The product applies easily and smoothly, leaving the lips soft, smooth and supple.

<u>Ingredients:</u>	<u>% W/W</u>
1. Ozokerite	6.00
2. Carnauba Wax	10.00
3. Shebu	9.00
4. Ritalan	55.00
5. Ritaderm	10.00
6. Supersat	10.00
7. Color, Fragrance and Preservatives	QS

Compounding Procedure:

Weigh all ingredients into a suitable container, omitting the perfume and heat, while stirring, to approximately 83C. Stir until all ingredients which are solids melt. When all ingredients have melted, begin cooling the batch. Cool to approximately 55C, add the perfume. Stir continuously and pour into suitable molds.

Formulation HB-89-S-8

Moisturizing Lip Pot

This formulation applies smoothly and evenly and imparts a rich, supple and moist appearance to the lips.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. White Petrolatum	73.80
2. Lanolin, Extra Deodorized	9.20
3. Pationic CSL	7.00
Part B:	
4. Distilled Water	10.00
5. Preservatives	QS

Compounding Procedure:

Heat Petrolatum and Lanolin to 180F. Add CSL with mixing. Add water at 180F. Mix until uniform. Cool to 160F. Fill.

Formulation 103-66

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Sheer Leg Make-up

An attractive pearlescent cream, this formulation offers a product which is both rub resistant and water resistant.

<u>Phase:</u>	<u>Ingredients:</u>	<u>% wt.</u>
A.	Petroleum Distillate (and) Quaternium-18 Hectorite (and) Propylene Carbonate (Bentone Gel SS-71) (q.s. to 100%)	41.50
B.	C9-11 Isoparaffin (Soltrol 100) Cyclomethicone (SF 1173)	3.00 3.00
C.	Beeswax (White, Bleached Beeswax) PVP/Eicosene Copolymer (Ganex V220) Stearyl Alcohol (Adol 64) Isopropyl Lanolate (Amerlate P) Stearic Acid (Emersol 120) Silica Triethanolamine Antimicrobials	10.00 5.00 3.00 2.00 1.00 0.80 0.50 q.s.
D.	Gemtone Tan Opal G005 Flamenco Pearl 110C Mearlmica SVA	10.00 15.00 4.90
I.	Add Phase A ingredient to a vessel equipped with a side sweep agitator.	
II.	Mix in Phase B with gentle agitation until smooth.	
III.	Add all ingredients in Phase C while heating to 90+-3C.	
IV.	Disperse pigment (Phase D) into hot base. Mix until completely uniform.	
V.	Cool and pour into appropriate packaging. Note: Care should be taken to avoid loss of volatile solvents.	
Formulation CLB-920046		

Sparkling Ruby Nail Enamel

<u>Phase:</u>	<u>Ingredients:</u>	<u>%wt.</u>
A.	Suspending Lacquer SLF-2	80.00
	Biju Ultra UXD	2.00
	Timica Extra Large Sparkle 110S	1.00
	D&C Red #6, Ba Lake (7.9% Dispersion in Nitrocellulose Base, CB-70)	6.00
	D&C Red #7, Ca Lake (7.9% Dispersion in Nitrocellulose Base, CB-11)	2.00
	D&C Red #34, Ca Lake (7.9% Dispersion in Nitrocellulose Base, CB-91)	0.75
	Dimethicone (Dow Corning 200 50 cs. - 1% in Butyl Acetate)	1.00
	Tosylamide/Epoxy Resin (Lustabrite S-70)	4.00
B.	Thinners*	3.25
	* Thinners: Butyl Acetate (Urethane Grade)	36.00
	Ethyl Acetate (Urethane Grade)	13.00
	Toluene	51.00
I.	Combine Phase A ingredients in a vessel fitted with a propellor type mixer and stir until uniform. II. Combine Phase B ingredients (thinners) in a secondary vessel and mix well until uniform. III. Add Phase B to Phase A while stirring until uniform. Note: The quality of Phase B may be varied to compensate for evaporation or viscosity adjustment.	
	Formulation CLN-922853A	

SOURCE: The Mearl Corp.: Suggested Formulations

**Silky Pressed Powder Eyeshadow**

A silky pressed powder eyeshadow formulation using creamy textured Mearlmica SVA. This product has good pay-off, smooth silky feel and excellent wear characteristics.

<u>Phase:</u>	<u>Ingredients:</u>	<u>% wt.</u>
A.	Talc (q.s. to 100%)	22.20
	Zinc Stearate	4.00
	Polymethyl Methacrylate (Microspheres M-100)	2.00
	Cloisone' Super Blue 636Z	15.68
	Cloisone' Violet 525C	10.12
	Mearlmica SVA	10.00
	Antimicrobial	q.s.
B.	Dimethicone (Dow Corning 200 Fluid)	9.00
	Diisostearyl Malate (Cosmol 222)	3.00
	Sesame Seed Oil (Sesame Seed Oil Super Refined)	3.00
	Sorbitan Isostearate (Crill 6)	2.50
	Hydrogenated Polybutene (Panalane)	1.50
	Antioxidant	q.s.
C.	Cloisone' Super Blue 636Z	10.00
	Cloisone' Violet 525C	7.00

**Procedure:**

- I. Thoroughly blend and disperse Phase A in appropriate dry blending/dispersing equipment. II. Add Phase B ingredients into a support vessel. Heat and mix until uniform. III. Spray Phase B into premixed Phase A and continue blending. IV. Pulverize and return to blender. V. Add Phase C to Phase A-B and mix until uniform.

Formulation CLE-921234

**"Touch of Velvet" Eye Shadow**

A low luster eye shadow possessing an unusual degree of transparency and luminosity. The Mearltalc TCA and Mearlmica SVA also contribute to the uniform application and long wear of this formulation.

<u>Phase:</u>	<u>Ingredients:</u>	<u>%wt.</u>
A.	Mearltalc TCA (q.s. to 100%)	39.50
	Mearlmica SVA	25.00
	Manganese Violet (C43-001 Mango Violet)	15.00
	Calcium Stearate (Calcium Stearate Regular)	5.00
	Mearlite LBU	5.00
	Nylon-12 (Orgasol 2002D Natural Extra Cos)	2.50
	Ultramarine Blue (C43-1810 Cosmetic Blue)	2.00
	Iron Oxide (C33-134 Cosmetic Black)	1.50
	Iron Oxide (C33-5138 Cosmetic Russet)	1.50
	Antimicrobials	q.s.
B.	Cetyl Octanoate (Bernel Ester CO)	1.50
	Polydecene (Ethylflo 366 NF)	1.50
	Antioxidant	q.s.

**Procedure:**

- I. Thoroughly blend and disperse Phase A in appropriate dry blending/dispersing equipment. II. Add Phase B ingredients into a support vessel. Heat and mix until uniform. III. Spray Phase B into premixed Phase A and continue blending. IV. Pulverize and return to blender. V. Add Phase C to Phase A-B and mix until uniform.

SOURCE: The Mearl Corp.: Formulation CLE-922277

Skin Conditioning Mousse

	<u>%(w/w)</u>
Deionized Water	91.00
PEG-75 Lanolin	1.00
Lexgard M	0.20
Lexquat AMG-WC	5.80
Propylene Glycol USP	2.00

**Procedure:**

Combine ingredients with mild heat. Cool to room temperature, fill and charge.

**Charge:** 90% concentrate/10% propellant A46

**SOURCE:** Inolex Chemical Co.: Formulation SK-101

Make-up Remover

<u>Ingredient:</u>		<u>Wt. %</u>
Capric/Caprylic Triglyceride	Mazol 1400	12.0
PEG 400 Dilaurate	Mapeg 400 DL	6.0
Mineral Oil	Drakeol 7	82.0

Appearance: Clear, water-white

Performance: A light oil with good solvency. Rinses off with water, leaving a light emollient after-feeling.

**Procedure:**

Blend all ingredients at room temperature.

**SOURCE:** PPG Industries, Inc.: Formulation U-101

Skin Guardian

	% Weight
Phase A:	
Water	77.50
Carbomer-941 (Carbopol 941)	0.30
Trisodium EDTA (Hampene Na3T)	0.30
Triethanolamine, 99%	0.50
Phase B:	
PEG-75 (Carbowax 3350)	2.00
Glycereth-26 (Liponic EG-1)	1.50
Oleth-20 (Volpo 20)	3.50
PEG-6 Almond Glycerides (Crovol A-70)	0.50
Sucrose Stearate (Crodesta F-160)	1.30
Allantoin	0.50
Germaben II	1.00
Phase C:	
Dimethicone Copolyol (Dow Corning 190)	2.00
Butylene Glycol	2.00
Panthenol (Dexpanthenol)	0.10
Retinyl Palmitate (Vitamin A Palmitate)	0.10
Squalane	0.20
BHT	0.20
Oleth-10 (Volpo 10)	2.00
Octyl Methoxycinnamate	0.10
Glycoceramides (and) Phospholipids (and) Cholesterol (Glycosomes)	0.10
Phase D:	
Hydrolyzed Animal Protein (and) Hyaluronic Acid (Cromoist HYA)	1.00
Hydrolyzed Animal Protein (Crotein SPA)	3.00
Phase E:	
Triethanolamine, 99%	0.25
Phase F:	
FD&C Red #4, 1% Solution	0.025
FD&C Yellow #5, 1% Solution	0.025

**Procedure:**

Dust Carbopol 941 into cold water under moderate agitation. Let mix until completely hydrated (30 minutes). Add Hampene Na3T. Mix until clear. Neutralize Carbopol with triethanolamine. Add the ingredients from Phase B to Phase A in the order listed, mixing after each addition until the batch is uniform. Warm batch to 60C to mix in Crodesta F-160, Allantoin, and Germaben II. Maintain 60C for addition of Phase C. While warming Phase B, prepare Phase C in a separate vessel. Add ingredients sequentially, mixing after each addition and warm mixture to 63C. When clear and at 63C, add Phase C to batch slowly with mixing. Mix until uniform. Let cool with mixing to 40C. Add Phase D ingredients sequentially. Add Phase E and Phase F at room temperature. Adjust pH to 7.2.

**SOURCE:** Sutton Laboratories: Suggested Formulation

**Skin Mousse with Shebu for Dry Skin**

This mousse will moisturize and condition the skin and leave a smooth after feel.

<b><u>Ingredients:</u></b>	<b><u>% W/W</u></b>
1. Almond Oil	0.20
2. Coconut Oil	0.20
3. Shebu	2.00
4. Ritawax ALA	1.00
5. Ritachol 2000	1.50
6. Ritachol	5.00
7. Mineral Oil	2.00
8. Stearic Acid	1.50
9. Dimethicone	0.25
10. Pationic ISL	2.00
11. Distilled Water	79.15
12. Propylene Glycol	3.50
13. Hydroxyethylcellulose	0.20
14. Laneto 50	0.50
15. Triethanolamine (50%)	1.00
16. Color, Preservatives and Fragrance	QS

**Compounding Procedure:**

Combine items 1-10 and heat to 70C. Combine items 11-15 and heat to 70C. Combine both phases, mix well, and cool with stirring to 40C. Add remaining ingredients and package.

Formulation HB-89-S-6

**Skin Smoother and Moisturizer  
With Shea Butter and Collagen**

Moisturizing is realized from Glycerin, Pationic SSL, Grillo-ten and Panthenol. Emollience is contributed by the Shebu and there is a temporary smoothing of the skin by the Ritacollagen.

<b><u>Ingredients:</u></b>	<b><u>% W/W</u></b>
1. Distilled Water	84.00
2. Glycerin	5.00
3. Shebu	3.00
4. Pationic SSL	3.00
5. Grillo-ten LSE 87K	1.00
6. Rita GMS	2.00
7. Ritapan DL	1.00
8. Ritacollagen BA-1	1.00
9. Color, Fragrance and Preservative	QS

**Compounding Procedure:**

Combine items 1 and 2 and heat to 70C. Combine items 3-6 and heat to 70C. Combine both phases, cool with mixing to 45C, add remaining ingredients. Cool to 35C. Package.

Formulation HB-89-S-9

SOURCE: R.I.T.A. Corp.: Suggested Formulations



Skin Toner

This skin toner refreshingly tightens the skin and leaves a smooth after-feel. Contains substantive moisturizing, due to the Pationic ISL, Patlac NAL and Patlac IL.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Alcohol SD 40	70.00
2. Patlac NAL	5.00
3. Patlac IL	3.00
4. Perfume	2.70
5. Pationic ISL	2.00
6. Witch Hazel	2.00
Part B:	
7. Distilled Water	15.30

**Compounding Procedure:**

Combine A and mix until clear. Slowly add B with agitation. Filter if desirable.  
Formulation 101-77

Toner

A smooth freshener that tones up and firms pores. Alcohol free.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	82.60
2. Witch Hazel	16.00
3. Pationic 122A	1.00
4. Peppermint	0.10
5. Dowicil 200	0.20
6. Methylparaben	0.10

**Compounding Procedure:**

Add peppermint to Pationic 122A, mix. Add to remaining materials and mix.

Formulation 103-174

**SOURCE: R.I.T.A. Corp.: Suggested Formulations**

**"Slender" Stick Eyeshadow**

This easy to prepare formulation produces a non-greasy stick which can be easily applied. Excellent pay-off and long-wearing characteristics.

<u>Phase:</u>	<u>Ingredients:</u>	<u>% wt.</u>
A.	Castor Oil (q.s. to 100%)	30.90
	Shea Butter (Shebu Refined)	6.10
	Caprylic/Capric Triglyceride (Neobee M5)	6.10
	Beeswax	4.60
	Candellila Wax	4.60
	Ozokerite Wax	5.00
	Isopropyl Myristate	3.00
	Isopropyl Lanolate (Amerlate P)	4.60
	Talc	2.10
	Octyl Methoxycinnamate (Parsol MCX)	3.00
	Antioxidant	q.s.
	Antimicrobial	q.s.
B.	Flamenco Twilight Blue 620CB	15.00
	Gemtone Moonstone G004	15.00

**Procedure:**

I. Weigh all the ingredients in Phase A into a vessel and heat to 85+-3C, stirring until melted and uniform. II. Add pre-mixed Phase B to Phase A, maintaining temperature at 85+-3C for 30 minutes with gentle agitation (This will allow for de-aeration if vacuum is not available). III. Pour at 75+-3C.

Note: If iron oxide or organic pigments are used, they should first be dispersed in Castor oil; this mixture should then be milled in either a colloid or roller mill.

**Typical Properties:**

Droop Point (44C): Passes  
Capillary Point: 56C+-3C  
Formulation CLE-92008

**Loose Powder Eyeshadow**

A highly pearlescent powder eyeshadow suitable for filling into pots or automatic containers.

<u>Phase:</u>	<u>Ingredients:</u>	<u>%wt.</u>
A.	Talc (q.s. to 100%)	6.00
	Zinc Stearate	3.00
	Silica	1.00
	Mearlite LBU	5.00
	Gemtone Amber G001	55.00
	Antimicrobials	q.s.
B.	Mineral Oil (Carnation White Mineral Oil)	10.00
C.	Gemtone Amber G001	20.00

**Procedure:**

I. Thoroughly blend and disperse Phase A in appropriate dry blending/dispersing equipment. II. Spray Phase B into premixed Phase A and continue blending. III. Pulverize and return to blender. IV. Add Phase C to Phase A-B and mix until uniform

**Typical Properties:**

Bulk Density: 13.30+-0.5 lbs/ft. 3    Texture: Soft  
Formulation CLE-920010

SOURCE: The Mearl Corp.; Suggested Formulations

Sprayable Moisturizer

<u>Ingredients:</u>	<u>% by weight</u>
Part A:	
Deionized Water	79.65
Glycerin	6.00
DMDM Hydantoin	0.30
Methylparaben	0.10
Propylparaben	0.05
Part B:	
Mineral Oil	10.00
Octyldodecyl Stearoylstearate	3.00
Oleth-10	0.40
Pemulen TR-1	0.30
Part C:	
AMP-95	0.10
Part D:	
Disodium EDTA	0.10

Procedure:

Combine A ingredients in a vessel which will contain the entire formulation. Parabens may be predispersed in glycerin to accelerate dissolution. Mix until parabens have dissolved. Combine B ingredients in a separate vessel. Mix to disrupt any soft agglomerates of Pemulen. With moderate agitation, add B to A. Mix for 10-15 minutes to allow resin to swell. Add C and use vigorous mixing to produce a smooth, white emulsion. Add D incrementally until a viscosity of 600-900 cps is obtained.

Formulation PF-0225 suggested by B.F. Goodrich

Moisturizing Gelee with Pseudocollagen

<u>Ingredients:</u>	<u>% by weight</u>
Carbopol 1342, 2% aq.	50.00
AMP-95	1.00
Suttocide A	1.00
Quamectant AM-50	5.00
Demineralized Water	q.s.
Fomblin HC04 Emulsion	0.25
Pseudocollagen	5.00
Fragrance FR-30	0.10
Polysorbate-20	1.00

Procedure:

1. Disperse Carbopol premix in water at room temperature using sweep agitation.
2. Add AMP and mix slowly until a clear, uniform gel.
3. Add Suttocide A and mix thoroughly.
4. Add Quamectant and mix thoroughly.
5. Disperse fragrance in Polysorbate and add. Mix well.

Formulation PF-0207 suggested by Brooks Inds.

SOURCE: Angus Chemical Corp.: Suggested Formulations

Temporary Wrinkle Remover

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Acritamer 941	0.20
2. Distilled Water	71.15
3. Glycerin	4.00
4. Methylparaben	0.10
Part B:	
5. Ritachol	2.50
6. Ritawax ALA	1.00
7. Glyceryl Stearate	1.00
8. Stearic Acid	2.00
9. Ritalan	4.50
10. Propylparaben	0.05
Part C:	
11. Triethanolamine (50%)	2.00
Part D:	
12. Bovinal 30	7.50
Part E:	
13. 2-Phenoxyethanol	2.00
14. Benzyl Alcohol	2.00

Compounding Procedure:

Disperse Acritamer in water and glycerin with rapid agitation. When uniform, heat to 75C. Combine part B and heat to 75C. Add part B to part A with agitation, avoid aeration. Mix until uniform. Add part C and mix until uniform. Cool to 30C. Add part D and mix until uniform. Add part E.

Formulation 108-3B

Temporary Wrinkle Remover

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Ritachol	2.50
2. Ritawax ALA	1.00
3. Glyceryl Stearate	1.00
4. Stearic Acid	2.00
5. Ritalan C	5.00
6. Pationic ISL	1.25
Part B:	
7. Acritamer 941	0.20
8. Distilled Water	70.55
9. Propylene Glycol	4.50
Part C:	
10. Triethanolamine (50%)	2.00
Part D:	
11. Bovinal 30	6.00
12. Phenoxyethanol	2.00
13. Benzyl Alcohol	2.00

Compounding Procedure:

Preweight part A and heat to 70C. Premix part B and heat to 70C. When both are at temperature, combine part A and part B and mix until uniform. Cool with mixing to 40C. During cooling add part C. At 40C, add part D.

Formulation 108-3C

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Temporary Wrinkle Remover

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Acritamer 941	0.20
2. Distilled Water	75.30
3. Glycerin	4.00
Part B:	
4. Ritachol	2.50
5. Ritawax ALA	1.00
6. Glyceryl Stearate	1.00
7. Stearic Acid	2.00
8. Ritalan	4.50
Part C:	
9. Triethanolamine (50%)	2.00
Part D:	
10. Bovinal 30	7.50
Part E:	
11. Color, Fragrance, Preservatives	QS

Compounding Procedure:

Disperse the Acritamer in water and Glycerin with rapid agitation. When uniform, heat to 75C. Combine the ingredients of Part B and heat to 75C. Add Part B to Part A with agitation-avoid aeration. Mix until uniform. Add Part C and mix until uniform. Cool to 30C. Add Part D and mix until uniform. Add color, fragrances and preservatives.

Formulation HB-89-A-14

Cuticle Remover

This formulation contains 2.00% by weight of sodium hydroxide. The composition also contains Ritachol to help ameliorate skin-related problems due to sodium hydroxide. The emulsion is a smooth, creamy-textured oil/water type.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Petrolatum USP White	8.00
2. Ritachol	2.00
3. Rita CA	13.00
4. Propylparaben	0.05
Part B:	
5. Laureth-12	2.50
6. Rita GMS	2.50
7. Distilled Water	69.55
8. Sodium Hydroxide	2.00
9. Methylparaben	0.15
10. Quaternium 15	0.25

Compounding Procedure:

Combine Part A and begin heating with mixing to 70-73C. Add items 5, 6, 7 and 9 into another container and begin heating with mixing to 70-73C. When both Part A and Part B are at 70-73C, add Part A to Part B while mixing. Mix for 15 minutes. Begin cooling to 25-30C and add item 8 when at 30C. Mix until uniform. Add item 10. Mix until uniform. Package.

Formulation HB-89-R-37

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Vitamin A Eye Gel

<u>Phase:</u>	<u>Ingredients:</u>	<u>Percent by Weight</u>
1	Deionized water	63.65
	Aloe vera	1.00
	Methocel 40-101	0.10
	Triethanolamine	0.01
2	Glycerin	2.00
	Dow Corning 193	2.00
3	Polysorbate 20	0.50
	Retinol	0.05
4	Propylene glycol	3.00
	Methylparaben	0.18
5	Deionized water	1.00
	Dowicil 200 preservative	0.10
	Versene 100 (EDTA)	0.01
6	Carbopol 940 2% solution	25.00
7	Deionized water	1.00
	Triethanolamine	0.40

Procedure:

1. Add water to primary compounding vessel. With rapid agitation, add Aloe vera gel. Sprinkle in Methocel 40-101 and mix 5 minutes. Add TEA and mix until Methocel is completely hydrated.
2. In a separate vessel, blend ingredients from Phase 2. Add to batch and mix 5 minutes.
3. In a separate vessel, blend ingredients from Phase 3. Add to batch and mix 5 minutes.
4. In a separate vessel, blend ingredients from Phase 4. Heat to 60C and mix until Methylparaben is dissolved. Cool to 30-35C and add to batch. Mix until batch is clear.
5. In a separate vessel, blend ingredients from Phase 5. Add to batch.
6. Add Phase 6 (2% Carbopol 940 which has been previously prepared) to batch and mix for 15 minutes.
7. In a separate vessel, blend ingredients from Phase 7. Add to batch and mix until batch has gelled and is crystal clear.

SOURCE: Dow Chemical Co.: Suggested Formulation

Cuticle Coating

An excellent product for shine, split ends or leave-on conditioner.

Materials:

	<u>Part/Wt(%)</u>
SF1214	65.0
Isohexadecane	33.0
Parsol MCX	2.0
Propylparaben	q.s.

Procedure:

- 1) Predissolve Parsol MCX and propylparaben in Isohexadecane or Isohexadecane/SF1173 blend.
- 2) Slowly add SF1214 to the step (1) mixture until homogeneous.

Comments:

For faster drying, some of the Isohexadecane can be replaced with SF1173 (cyclomethicone-tetramer).

SOURCE: GE Silicones: Formulation HP303

Water Resistant Mascara

<u>Phase:</u>	<u>Ingredients:</u>	<u>Percent by Weight</u>
1	Deionized water	15.70
	Antifoam AF emulsion	0.05
2	Propylene glycol	4.00
	Veegum	0.50
	Methocel 40-202	0.20
3	Deionized water	30.00
	PVP	4.00
4	Black iron oxide	10.00
5	Deionized water	2.00
	TEA	1.50
6	Silicone 345	6.00
7	Propylene glycol	1.00
	Phenoxyethanol	0.50
	Ethylparaben	0.10
	Methylparaben	0.20
8	Carnauba wax flakes	5.50
	Beeswax	9.00
	Stearic acid	2.00
	Oleic acid	1.00
	Lexemul P	2.30
	Lexemul 515	2.30
	Propylparaben	0.10
	Indapol	1.00
9	Deionized water	1.00
	Dowicil 200 preservative	0.05

**Procedure:**

1. Weigh all ingredients in Phase 8 into an auxiliary compounding kettle equipped with a mixer. Heat to 82C.
2. Weigh materials in Phase 1 into the main kettle equipped with a colloid mill. Turn on mill.
3. Slowly add Phase 4 to the main kettle and pass through colloid mill until all pigments are completely dispersed.
4. Add Phase 2 (which has been previously dispersed) to the main kettle and mill until smooth.
5. Add Phase 3 (which has been previously dispersed) to the main kettle. Mix 5 minutes and turn off mill.
6. Add Phase 5 with mixing to the main kettle. Start to heat batch to 80C.
7. At 80C, add Phase 6. Mix 5 minutes and then add Phase 7 which has been previously heated to 60-80C and mixed to dissolve the parabens.
8. Slowly add the oil phase (phase 8) at 82C to the water phase at 80C. Mix for 10 minutes and start to cool.
9. At 40-45C, add Phase 9. Mix batch down to 30C.

**SOURCE:** Dow Chemical Co.: Suggested Formulation

W/O Liquid Makeup

A W/O emulsion based liquid makeup with improved pigment grinds.

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Polyglyceryl-4 Isostearate (and) Cetyl Dimethicone	
Copolyol (and) Hexyl Laurate (Abil WE-09)	4.50
Cyclomethicone (Abil B 8839)	5.00
Cetyl Dimethicone (Abil Wax 9801)	1.00
Caprylic/Capric Triglycerides (Tegosoft CT)	1.00
Synthetic Wax	0.45
Hydrogenated Castor Oil	0.45
Mineral Oil	4.50
Phase B:	
Talc, USP	5.00
Titanium Dioxide	5.00
Iron Oxides	3.70
Phase C:	
Water	68.90
Sodium Chloride	0.50
Preservatives, Fragrance	Q.S.

Procedure:

Mix the ingredients of Phase A together, heat to 70C. When uniform, cool to 50C. Add Phase B. Mill. Heat water to 50C. Add the sodium chloride. Mix. Gently stream into phase A/B with lightning mixer. Cool to 35C, add preservatives and fragrance. Homogenize. A very stable soft creamy lotion results with a good pigment dispersion.

W/O Liquid Makeup  
(Cold Mix Formula)

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Cetyl Dimethicone Copolyol (and) Polyglyceryl-4	
Isostearate (and) Hexyl Laurate (Abil WE-09)	5.0
Stearoxy Dimethicone (Abil Wax 2434)	3.0
Cyclomethicone (Abil B 8839)	9.0
Caprylic/Capric Triglyceride (Tegosoft CT)	6.0
Titanium Dioxide	4.0
Iron Oxides	1.0
Phase B:	
Propylene Glycol	3.0
Sodium Chloride	0.8
Water	68.2
Phase C:	
Fragrance	Q.S.
Preservatives	Q.S.

Procedure:

1. In a vessel, grind the Titanium Dioxide and pigments into the rest of the ingredients of Phase A.
2. In a separate vessel, blend the ingredients of Phase B.
3. Slowly with agitation, add Phase B to Phase A. Mix until uniform.
4. Add the ingredients of Phase C with agitation.
5. Homogenize and dispense.

SOURCE: Goldschmidt Chemical Corp.: Suggested Formulations



W/O Liquid Makeup - Oil Free

A W/O emulsion based liquid makeup with improved pigment grinds.

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Polyglyceryl-4 Isostearate (and) Cetyl Dimethicone	
Copolyol (and) Hexyl Laurate (Abil WE-09)	4.50
Cyclomethicone (Abil B 8839)	10.50
Cetyl Dimethicone (Abil Wax 9801)	1.00
Synthetic Wax	0.45
Hydrogenated Castor Oil	0.45
Phase B:	
Talc, USP	5.00
Titanium Dioxide	5.00
Iron Oxides	3.70
Phase C:	
Water	68.90
Sodium Chloride	0.50
Preservatives, Fragrance	Q.S.

Procedure:

Mix the ingredients of Phase A together, heat to 70C. When uniform, cool to 50C. Add Phase B. Mill. Heat water to 50C. Add the sodium chloride. Mix. Gently stream into Phase A/B with lightning mixer. Cool to 35C, add preservatives and fragrance. Homogenize. A very stable soft creamy lotion results with a good pigment dispersion.

Liquid Hand and Facial Cleanser

<u>Ingredients:</u>	<u>% w/w</u>
Water	51.0
Sodium C12-15 Alkyl Sulfate	25.0
Sodium Laureth Sulfate	15.0
PEG-7 Glyceryl Cocoate (Tegosoft GC)	2.0
Cocamidopropyl Betaine (Tego-Betaine L-7)	5.5
Dimethicone Copolyol (Abil B88183)	0.5
Citric Acid	to pH 6.5
Color	Q.S.
Preservatives	Q.S.
Fragrance	Q.S.
PEG-18 Glyceryl Oleate/Cocoate (Antil 171)	1.0
Sodium Chloride-25% solution to adjust viscosity	Q.S.

Procedure:

1. Dissolve the Tetrasodium EDTA in the water.
2. Add ingredients in order, mixing between additions. Avoid air entrapment.
3. Slowly mix in the PEG-18 Glyceryl Oleate/Cocoate.
4. Adjust viscosity with the 25% solution of Ammonium Chloride.

SOURCE: Goldschmidt Chemical Corp.: Suggested Formulations

# **Section V**

## **Creams**

**All Purpose Cream**

<b><u>Ingredients:</u></b>	<b><u>% by Weight</u></b>
Part A:	
Mineral oil 125/135	10.00
Kessco Isopropyl Palmitate	9.00
Kessco Cetyl Alcohol	5.00
Polowax	5.00
Stearic acid, triple pressed	3.00
Part B:	
Propylene glycol	2.50
Triethanolamine 85%	1.00
Methyl paraben	0.15
Propyl paraben	0.05
Fragrance	Q.S.
D.I. Water	Q.S. to 100

**Mixing Procedure:**

Heat D.I. water to 65-70C. Add components of Part B with mixing until completely dissolved. Mix the components of Part A until homogeneous and heat to 60-75C. Add Part A to Part B with mixing. Cool to 40-45C and add fragrance, if desired. Cool to 30-35C and package. Consistency develops fully after 24 hours at room temperature.

**Physical Attributes:**

White, creamy paste  
 pH (as is): 7-9  
 Freeze thaw stable  
 Stable at 50C for two weeks

**Comment:**

Excellent for dry skin. Very thick and creamy.  
 Formulation No. 442

**Foundation Cream**

<b><u>Ingredients:</u></b>	<b><u>% by Weight</u></b>
Part A:	
Stearic acid, triple pressed	19.8
Kessco Glycerol Monostearate SEAS	3.0
Kessco Isopropyl Myristate	3.0
Propylene glycol, USP	3.0
Lanolin oil	1.0
Propyl paraben	0.2
Part B:	
D.I. water	69.2
Triethanolamine	0.6
Methyl paraben	0.2

**Mixing Procedure:**

Blend the components of Part A and heat to 75C with mixing. Blend the components of Part B with mixing and heat to 75C. With constant agitation, add Part A to Part B. Cool with mixing to room temperature.

**Physical Properties:**

Pearly, white cream  
 Viscosity at 25C: 2000 cps  
 pH (as is): 7-8  
 Product was freeze thaw stable, stable at 50C for two weeks

**Comment:** This foundation cream has a dry feel

**SOURCE:** Stepan Co.; Formulation No. 436

**All-Purpose Dry Skin Cream**

Glucquat 125 provides skin conditioning while acting together with the Glucam P-20 Distearate to maintain moisture in the skin. Glucate DO (w/o) and Promulgen D (o/w) act as a nonionic emulsifier pair. Acetulan imparts a smooth, velvety afterfeel while improving rub-in.

**Formula:****Water Phase:**

Glucquat 125 (Lauryl Methyl Gluceth-10 Hydroxypropyl-dimonium Chloride)	4.0%
Deionized Water	80.0

**Oil Phase:**

Glucam P-20 Distearate (PPG-20 Methyl Glucose Ether Distearate)	2.0
Glucate DO (Methyl Glucose Dioleate)	0.5
Promulgen D (Cetearyl Alcohol and Ceteareth-20)	4.5
Acetulan (Cetyl Acetate and Acetylated Lanolin Alcohol)	2.0
Cetal (Cetyl Alcohol)	1.0
Mineral Oil, 70 vis.	5.0
Cetyl Palmitate	1.0
Perfume and Preservative	q.s.

**Procedure:**

Add Glucquat 125 to deionized water, and heat to 80C with adequate agitation. Combine oil phase ingredients, and heat to 80C with propeller mixing. Slowly add water phase to oil phase, and mix until uniform. When material starts to thicken during cooling, change to slow sweep agitation.

**SOURCE:** Amerchol Corp.: Formulation T62-126-3

**Therapeutic Humectant Creme**

This high-powered moisturizer is designed to help heal chapped or cracked skin rapidly. It contains a high concentration of glycerin and is easily prepared at a skin compatible pH of 6. Phospholipid PTS helps create the smoothing properties which are readily perceived.

**Part A:**

Phospholipid PTS	%
Steareth-20	3.00
Glycerin	0.20
Methyl Paraben	10.00
Water	0.20
	72.60

**Part B:**

Steareth-2	1.30
Cetyl Alcohol	2.50
Myristyl Myristate	3.50
Finsolv TN	3.00
Hexyl Laurate	2.50
Dimethicone (100 cS)	1.00
Propyl Paraben	0.20

Heat both phases to 65C, and homogenize the oil phase into the water phase. Stir-cool to 40C and add fragrance, coloring or preservative as required. Fill.

**SOURCE:** Mona Industries, Inc.: Suggested Formulation

All Purpose Moisturizing CreamIngredients:

% by Wt.

## Part I:

Deionized Water	69.21
Propylene Glycol, USP	4.40
Carbopol 940	0.25
Methyl Parasept	0.10
d1-Panthenol, Cosmetic Grade (Code 63920)	1.00

## Part II:

Cetyl Alcohol	1.50
Super Hartolan	1.00
Carnation Mineral Oil	9.00
Emersol 132	2.38
Witcamide MAS	1.00
Sesame Oil, USP	4.20
Propyl Parasept	0.10
Silicone 200 Fluid, 325 cs.	2.00
Vitamin E Acetate, USP-FCC (Code 60526)	1.00
Tenox BHT	0.06

## Part III:

Triethanolamine, 98%	0.90
----------------------	------

## Part IV:

Vitamin A & D3 Blend (5:1 Ratio) (Code 63857)	1.00
---	------

## Part V:

Perfume Oil	0.30
-------------	------

## Part VI:

Germall 115	0.10
Deionized Water	0.50

Procedure:

Dissolve Carbopol 940 in water. Add remaining ingredients in Part I. Heat Part I and Part II to 75C. Add Part II to Part I mixing with an Eppenbach homomixer. Follow with the addition of Triethanolamine. Cool to 45C with continued mixing, then add Part IV. Add Part V and Part VI separately. Mix until homogeneous.

SOURCE: Roche Chemical Division: Formula SC 411

**Anti-Inflammatory Cream**

A rich oil in water cream for reduction of inflammation and irritation due to wind, sun, insect bites and irritants. Contains Panthenol for its anti-inflammatory and soothing effects. Promotes healing.

**Ingredients:****% W/W****Part A:**

1. Glycerol Stearate	11.50
2. Isopropyl Myristate	5.00
3. Ritasol	5.00
4. Pationic SSL	5.00
5. Stearic Acid	4.00
6. Mink Oil	2.75
7. Ritox 52	2.00
8. Beeswax	1.00
9. Shebu Refined	3.00
10. Propylparaben	0.05

**Part B:**

11. Laneto 50	5.00
12. Ritapan DL	3.00
13. Distilled Water	51.20
14. Methylparaben	0.10

**Part C:**

15. Triethanolamine (50%)	1.20
---------------------------	------

**Part D:**

16. Perfume	QS
17. Glydant 40-700	0.20

Combine Part A materials and heat with mixing to 75-80C. Combine Part B materials and heat to 75-80C. Add Part A to Part B with agitation. Immediately add triethanolamine (Part C). Mix 15 minutes. Begin cooling. Cool to 40C. Add perfume and Glydant. Mix until uniform. Cool to 35C.

Formulation HB-89-PA-22

**Oil in Water Cream**

A light cream with good moisturizing and softening properties. Emulsified with Pationic SSL and Cetearyl alcohol, both of which help soften the skin. The combination of Panthenol, propylene glycol and Pationic SSL moisturizes the skin. Panthenol also relieves irritation and promotes healing.

**Ingredients:****% W/W****Part A:**

1. Cetearyl Alcohol	5.00
2. Dimethicone	1.00
3. Isopropyl Palmitate	2.00
4. Pationic SSL	2.00

**Part B:**

5. Distilled Water	84.80
6. Ritapan DL	0.20
7. Propylene Glycol	5.00

**Part C:**

8. Color, Preservative, Fragrance	QS
-----------------------------------	----

Combine Part A ingredients and heat to 70C. Combine ingredients in Part B and heat to 70C. Add Part A to Part B, mix well. Cool with mixing to 45C, add remaining ingredients. Cool to 35C.

SOURCE: R.I.T.A. Corp.: Formulation HB-89-PA-8

Balancing Cream for Oily SkinIngredients:% by Wt.

Part I:	
Deionized Water	75.12
Carbopol 934	0.30
Propylene Glycol	2.00
Methyl Parasept	0.25
Allantoin	0.10
Veragel Liquid, 1:10	0.50
dl-Panthenol, Cosmetic Grade (Code 63920)	0.50
Sequestrene Na2	0.20
Ster-O-Pro	1.00

Part II:	
Parsol 1789	1.50
Parsol MCX	2.00
Emerest 2400	1.50
Brij 72	0.90
Brij 78	3.60
Lexol PG 865	2.00
Finsolv TN	2.00
Propyl Parasept	0.10
Cetyl Alcohol	3.25
Silicone 200 Fluid	0.20

Part III:	
Triethanolamine, 98%	0.28
Vitamin E Acetate, USP-FCC (Code 60526)	0.50

Part IV:	
Collasol	2.00
Perfume Oil	0.20

Procedure:

Disperse Carbopol in the water with rapid agitation. Add the rest of ingredients in Part I, heat to 75C. Separately heat ingredients in Part II to 75C. When both phases reach 75C, add Part II to Part I, with good mixing. Follow with addition of Triethanolamine and Vitamin E Acetate, each added separately. Remove heat and begin cooling. Continue mixing. When temperature reaches 40C add Collagen and Perfume Oil separately. Continue mixing and allow the batch to cool to room temperature.

SOURCE: Roche Chemical Division: Formula SC 408

**Barrier Cream**

An elegant water in oil emulsion which resists chemicals and oils better than silicone systems. It has excellent treatment properties contributed by Lanolin and good protection from Ritaplast. For use around grease, oil, dust, chemicals, permanent wave, relaxer and dyes. Easy to manufacture.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Mineral Oil	24.50
2. Ritaplast	20.00
3. Beeswax, Natural	13.00
4. Lanolin USP Extra-Deodorized	10.00
5. Ritalan C	2.00
6. Propylparaben	0.10
7. Ritahydrox	0.30
Part B:	
8. Distilled Water	28.50
9. Borax	1.30
10. Methylparaben	0.10
Part C:	
11. Perfume	0.20

**Compounding Procedure:**

Heat Part A and Part B to 165F. Add Part A to Part B with mixing. Cool to 120F. Add Part C.

**Caution:** Do not exceed 168F for compounding. Texture will be affected. Brookfield RVF: Initial Viscosity: 2,800 cps  
24 Hour: 10,500 cps

Formula HB-89-L-32/Ref. 106-3

**Barrier Cream**

An elegant water and oil emulsion with good rub-out, with excellent treatment properties contributed by Lanolin and good protection from Ritaplast. For use around grease, oil, chemicals, permanent waves, relaxer, and dyes. Easy to manufacture.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Mineral Oil	24.50
2. Ritaplast	20.00
3. Beeswax, Natural	13.00
4. Lanolin USP Extra-Deodorized	10.00
5. Ritalan C	2.00
6. Propylparaben	1.00
Part B:	
7. Distilled Water	28.80
8. Borax	1.30
9. Methylparaben	0.10
Part C:	
10. Perfume	0.20

**Compounding Procedure:**

Heat Part A and Part B to 165F. Add Part A to Part B with mixing. Cool to 120F. Add Part C.

Brookfield RVF: Initial Viscosity: 2,800 cps/24 Hour: 10,500 cps

Formulation 104-12/HB-89-L-15

**SOURCE:** R.I.T.A. Corp.: **Suggested Formulations**



### Barrier Cream Cold Mix Formula

<u>Ingredients:</u>	<u>%w/w</u>
Phase A:	
Polyglyceryl-4 Isostearate (and) Cetyl Dimethicone	
Copolyol (and) Hexyl Laurate (Abil WE-09)	5.0
Decyl Oleate (Tegosoft DO)	5.0
Caprylic/Capric Triglycerides (Tegosoft CT)	5.0
Isopropyl Myristate (Tegosoft M)	5.0
Silica	0.5
Phase B:	
Sodium Citrate (solution)*	20.0
Water	58.7
Hydroxyethylcellulose	0.8
Phase C:	
Fragrance	Q.S.
Preservatives	Q.S.
* 100 G Sodium Citrate/1 liter water.	
pH adjusted to 5.0 with Citric Acid.	

**Procedure:**

1. In a vessel, blend together the ingredients of Phase A until uniform.
2. In a separate vessel, disperse the Hydroxyethylcellulose into the water.
3. Add the Phase B slowly to Phase A with agitation.
4. Add Phase C, mix until dispersed
5. Homogenize and dispense.

### Emollient Cream (W/O Emulsion)

<u>Ingredients:</u>	<u>% w/w</u>
Oil Phase:	
Polyglyceryl-4 Isostearate (and) Cetyl Dimethicone	
Copolyol (and) Hexyl Laurate (Abil WE-09)	5.0
Hydrogenated Castor Oil	0.5
Synthetic Wax	0.5
Mineral Oil (70 SUS)	8.0
Cetyl Dimethicone (Abil Wax 9801)	2.0
Isopropyl Myristate (Tegosoft M)	4.0
Water Phase:	
Water	79.2
NaCl	0.8
Preservatives, Color, Fragrance	Q.S.

**Procedure:**

1. Add the components of the oil phase together. Heat to melt and disperse the waxes. When dispersed, maintain temperature of 50-60C.
2. Mix the water and sodium chloride. Heat to 50-60C.
3. With lightning mixing, stream the water phase into the oil phase.
4. With sweep agitation, cool to 35C. Add color, fragrance and preservatives.
6. Homogenize with a roto-stator homogenizer.

**SOURCE:** Goldschmidt Chemical Corp.: Suggested Formulations

**Cleansing Cream-A**  
**(W/O Emulsion)**

**Ingredients:**

	<u>%w/w</u>
Phase A:	
Cetyl Dimethicone Copolyol (Abil EM-90)	2.0
Polyglyceryl-4 Isostearate (Isolan GI 34)	0.5
Mineral Oil	16.0
Cetyl Dimethicone (Abil Wax 9801)	0.5
Cetearyl Isononanoate (Tegosoft CI)	0.5
Hydrogenated Castor Oil	0.8
Synthetic Wax	1.2
Phase B:	
Water	77.9
Sodium Chloride	0.6
Preservatives	Q.S.

**Cleansing Cream-B**  
**(W/O Emulsion)**

**Ingredients:**

	<u>%w/w</u>
Phase A:	
Polyglyceryl-4 Isostearate (and) Cetyl Dimethicone Copolyol (and) Hexyl Laurate (Abil WE-09)	5.0
Mineral Oil	14.5
Cetyl Dimethicone (Abil Wax 9801)	0.5
Cetearyl Isononanoate (Tegosoft CI)	0.5
Hydrogenated Castor Oil	0.8
Synthetic Wax	1.2
Phase B:	
Water	76.9
Sodium Chloride	0.6
Preservatives	Q.S.

**Procedure:**

1. Combine the ingredients of Phase A. Heat to 80C. Mix until uniform.
2. Combine the ingredients of Phase B. Heat to 50C.
3. Cool Phase A to 50C.
4. Slowly add B to A using a low shear propeller mixer. At all times, maintain a milky appearance.
5. Cool to 35C. Homogenize.

**SOURCE: Goldschmidt Chemical Corp.: Suggested Formulations**

Cocoa Butter Skin Cream (514145)

Microcrystalline Wax	32.0 wt%
Drakeol 9, Light Mineral Oil USP	29.6
Cocoa butter	28.0
Penreco Snow, White Petrolatum USP	10.0
Vitamin E Acetate	0.2
Allantoin	0.2

Melt the ingredients together with gentle stirring at 75C. When uniform, allow to cool and fill containers just prior to solidification. This cream can be made softer by decreasing the wax or cocoa butter by a few percent and by increasing the Drakeol 9. Alternatively, air can be whipped into the product as it cools for a softer consistency. Drakeol 7 can be substituted for Drakeol 9 with no noticeable difference in product texture or performance.

Moisturizing Cream (514140)

Part A:	
Drakeol 7, Light Mineral Oil USP	47.00 wt%
Laneth-25 (and) Ceteth-25 (and) Oleth-25 (and)	
Steareth-25	4.00
Glycol Stearate	4.00
Oleth-2	3.00
Cetyl Alcohol	3.00
Part B:	
Deionized water	38.80
Part C:	
Preservatives	0.20

Heat Part A to 70C. Heat Part B to 75C. Add Part B to Part A with stirring. Cool mixture to room temperature with stirring. Add Part C to the mixture below 60C, and add fragrance (if desired) below 45C.

SOURCE: Penreco: Penreco Cosmetic Formulary

**Cold Cream (514021)**

D Ideal for removing makeup, this glossy white cream goes on smoothly and leaves a silky, nongreasy afterfeel. Also, this cream can be used as a moisturizer all over the body.

Deionized water	49.6wt%
Drakeol 9, Light Mineral Oil USP	33.0
White Beeswax	16.5
Sodium borate	0.9
Preservatives	q.s.

Mix all ingredients together and heat to 70C with stirring. Agitate while cooling to room temperature. Add fragrance at 45C if desired.

**Dry Skin Cream (514105)**

This cream is opaque, white, and fluffy and goes on smoothly and leaves the skin feeling smooth and moisturized.

**Part A:**

Penreco Snow, White Petrolatum USP	35.00wt%
Sorbitan Sesquioleate	3.00
Mineral Oil (and) Lanolin Alcohol	2.00

**Part B:**

Deionized water	59.46
Carbopol 934	0.27
Triethanolamine	0.27

**Part C:**

Fragrance and preservatives	q.s.
-----------------------------	------

Disperse the Carbopol in the water at 70C. Add the triethanolamine. Heat Part A separately to 70C. Add Part A to Part B with stirring, and stir while cooling to 25C. At 45C, add preservatives and fragrance.

**Emollient Cream (514124)****Part A:**

Deionized water	70.50wt%
Glycerin	5.00
Triethanolamine	0.25
Carbopol 934	0.20

**Part B:**

Isopropyl myristate	7.00
Drakeol 7, Light Mineral Oil USP	5.60
Stearic Acid	3.50
Cetyl Alcohol	1.00
Laneth-16 (and) Ceteth-16 (and) Oleth-16 and Steareth-16	0.75
PEG-20 Glyceryl Stearate	0.75
Lanolin Alcohol	0.50
Polysorbate 80	0.50
Dimethicone, 200 cSt	0.50
Preservatives	0.35
Cellulose Gum	0.10

Heat Part A to 60C with stirring. Separately, heat Part B to 70C with stirring. Add Part B to Part A slowly with stirring. Let stir until room temperature is reached. Any desired fragrance may be added when the mixture temperature is below 45C.

SOURCE: Penreco; Penreco Cosmetic Formulary

**Collagen Cleansing Cream**

A collagen cleansing cream with Ritachol emollients and glycerin as a humectant.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Glyceryl Stearate	3.00
2. Ritachol	4.00
3. Mineral Oil (Light)	20.00
4. Ritachol 2000	3.00
Part B:	
5. Distilled Water	63.00
6. Glycerin	5.00
Part C:	
7. Ritacollagen BA-1	2.00
8. Preservative	QS
9. Fragrance	QS

**Compounding Procedure:**

Combine ingredients in Part A in mixing tank and heat to 70C. Combine ingredients in Part B and heat to 70C with agitation. Add Part A to Part B with mixing and cool to 40C. Add C, cool and package.

Formulation HB-89-R-21

**Collagen Facial Washing Cream**

A superfatted cleansing cream which can be tissue off or washed away. Contains Ritachol as an emollient with glycerin and Pationic ISL to prevent drying.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Ritachol	2.00
2. Mineral Oil	2.00
3. Stearic Acid XXX	13.40
4. Propylene Glycol (and) Potassium Stearate	3.50
5. Propylparaben	0.05
Part B:	
6. Pationic ISL	2.00
7. Potassium Coco-Hydrolyzed Animal Protein	5.00
8. Glycerin	1.70
9. Triethanolamine (50%)	1.50
10. Distilled Water	66.22
11. Methylparaben	0.10
Part C:	
12. Kathon CG	0.03
13. Perfume	QS
Part D:	
14. Ritacollagen BA-1	2.50

**Compounding Procedure:**

Heat Parts A and B separately to 70-75C until dissolved. Add Part A to Part B with agitation. Mix and cool batch to 50C and add Part C. Cool batch with agitation to 29C, add Part D and fill.

Formulation HB-89-R-27

SOURCE: R.I.T.A. Corp.: Suggested Formulations

**Cream**

To diminish visible signs of aging; help restore and maintain a younger look.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	59.30
2. dl-Panthenol	1.00
3. Magnesium Aluminum Silicate	2.00
4. Montmorillonite	3.00
5. Methylparaben	0.40
6. Propylparaben	0.40
7. Ritaderm	0.50
8. Corn Starch	4.00
9. Bovinal 30	20.00
10. Sorbitol	5.00
11. Selastin EL 30	3.00
12. Vitamin E	1.00
13. Quaternium-15	0.20
14. Ritasilk	0.20

**Compounding Procedure:**

Weigh and add distilled water into a container and begin stirring. Add Magnesium aluminum silicate and stir until the material is completely hydrated and no lumps of the material are visible. Add the Montmorillonite and continue stirring until no lumps can be seen or felt. Begin heating this blend. Heat the blend to 70-73C, and add Methylparaben and Propylparaben. Continue heating, while continuing to stir. (An agitator capable of imparting relatively high shearing stress should be used, i.e. a variable speed agitator equipped with a propeller stirrer is recommended). Add the Ritaderm and Corn Starch and continue stirring until the blend is thoroughly smooth and free of lumps which can be seen or felt. Begin cooling the batch. Cool to 40-43C and add the remaining ingredients, while continuing to stir. Cool the batch to 25-30C and package into suitable containers.

**SOURCE:** R.I.T.A. Corp.: Formulation 103-173

Day Cream

<u>Ingredients:</u>	<u>% by Weight</u>
Part A:	
Stearic Acid	25.00
Phenyl Dimethicone	5.00
Part B:	
Glycerine	8.00
AMP	1.50
Water	60.50
Preservatives	q.s.
Perfume, pigments	q.s.

Procedure:

Heat Part A and Part B each to 75C. Stir A slowly into B. Stir cold.

Temperature Stability:

Over ten weeks at 45C.

Provides a white firm cream with a silky shine. Absorbed well, leaves a dry feeling on the skin.

SOURCE: Angus Chemical Corp.: Formula PF-0165E Suggested by Wacker Silicone

Skin Cream

<u>Oil Phase:</u>	<u>% w/w</u>
Glyceryl Stearate (and) Steareth-25 (and) Ceteth-20 (and) Stearyl Alcohol (Tego Care 150)	8.0
Stearyl Alcohol	1.0
Stearoxy Dimethicone (Abil Wax 2434)	1.0
Isopropyl Stearate (Tegosoft S) or Isopropyl Myristate (Tegosoft M)	8.0
Water Phase:	
Glycerin	3.0
Water	79.0
Preservatives	Q.S.
Perfume	Q.S.

Procedure:

1. Heat oil phase to 60-70C. Mix until uniform.
2. Heat water and glycerin to 60C. Add to oil phase. Mix. Homogenize.
3. Cool slowly to 35-40C with sweep agitation. Add fragrance.

SOURCE: Goldschmidt Chemical Corp.: Suggested Formulation

### Dihydroxyacetone Cream (W/O Emulsion)

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Polyglyceryl-4 Isostearate (and) Cetyl Dimethicone	
Copolyol (and) Hexyl Laurate (Abil WE-09)	5.0
Mineral Oil	5.0
Caprylic/Capric Triglycerides (Tegosoft CT)	4.0
Hydrogenated Castor Oil	0.5
Synthetic Wax	0.5
Stearoxy Dimethicone (Abil Wax 2434)	1.0
Cetearyl Octanoate (Tegosoft Liquid)	2.0
Phase B:	
Sorbitol (70%)	2.0
Glycerin	2.0
Sodium Chloride	1.5
Water	71.5
Preservatives, Color	Q.S.
Phase C:	
Dihydroxyacetone	5.0
Phase D:	
Fragrance	Q.S.
1. Add the components of the oil phase together. Heat to melt and disperse the waxes. When dispersed, maintain temperature of 50-60C.	
2. Mix the water, Sorbitol, Glycerin and Sodium Chloride. Heat to 50-60C.	
3. With lightning mixing, stream the water phase into the oil phase.	
4. With sweep agitation, cool to 35C.	
5. Add the Dihydroxyacetone.	
6. Add color, fragrance and preservatives.	
7. Homogenize with a rotor-stator homogenizer.	

SOURCE: Goldschmidt Chemical Corp.: Suggested Formulation

### Cleansing Cream

<u>Phase A:</u>	<u>% Weight</u>
Hydroxylated Lanolin (Ohlan)	3.00
Isopropyl Lanolate (Amerlate P)	2.00
Beeswax	10.00
Mineral Oil, 80-90 vis.	44.00
Glyceryl Stearate	2.00
Ozokerite	5.00
Phase B:	
Borax	0.60
Water	28.60
Phase C:	
Germaben II-E	1.00
Polyquaternium-24 (and) Hyaluronic Acid (Biocare	
Polymer HA-24)	3.80
Combine Phase A and heat to 80C. Combine Phase B and heat to 80C. Add Phase A to Phase B at 80C with agitation. Cool batch to 50C and add Germaben II-E. Cool to room temperature and add Biocare Polymer HA-24 with thorough agitation.	

SOURCE: Sutton Laboratories: Suggested Formulation



**Dry Skin Treatment Cream**

An oil/water emollient emulsion with Glycerin as a moisturizer.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Distilled Water	64.55
2. Acritamer 941	0.15
3. Glycerin	5.00
Part B:	
4. Ritachol 1000	12.50
5. Patlac IL	1.00
6. Mineral Oil	10.00
7. Ritalan C	2.50
8. Ritachol	4.00
Part C:	
9. Triethanolamine (50%)	0.30
Part D:	
10. Color, Fragrance, Preservatives	QS

**Compounding Procedure:**

Disperse the Acritamer in water and Glycerin and heat to 70C. Combine ingredients in Part B and heat to 70C. Add Part B to Part A with agitation. Avoid aeration. Add Part C to Parts A and B and begin cooling. Cool to 30C. Add color, fragrance and preservatives. Package.

Formulation H-89-A-15

**Dry Skin Night Cream**

This is a smooth, creamy textured emulsion especially helpful for people with excessively dry skin. Ritalan C and lotion have been included for emulsion stabilization, as well as the amelioration of dry skin.

<u>Ingredients:</u>	<u>% W/W</u>
1. Beeswax	13.00
2. Paraffin Wax	1.50
3. Mineral Oil	30.00
4. Petrolatum	13.00
5. Ritalan C	2.00
6. Lanolin	10.00
7. Propylparaben	0.10
8. Distilled Water	+29.00
9. Sodium Borate	1.30
10. Fragrance	QS
11. Methylparaben	0.10
12. Color	QS

**Compounding Procedure:**

Weigh and add item 1 through item 7 into a sweep-mixer and begin heating and stirring. Heat to 70-73C. Weigh and add items 8, 9 and 11 into a side container and begin heating and stirring. When both the Ritalan C- and water-containing blends are at 70-73C, add the Ritalan C- containing blend to the water containing blend while continuing to stir. When all the Ritalan C- containing blend has been added, begin cooling the batch. Cool to 40-43C and add the remaining ingredients. Continue to stir and cool. Cool to 25-30C and package fill into suitable containers.

Formulation HB-89-L-28

SOURCE: R.I.T.A. Corp.: Suggested Formulations

**Emollient Vanishing Cream**

This gentle, non-ionic oil/water emulsion formulation can be used to help soften and smooth skin in the area of the eye. Ritachol and Ritasol impart emollient and lubricating properties that assist in keeping the skin soft and supple. Ritapro is used as the primary emulsifying agent. Forlan L contributes additional emulsifying benefits while offering lanolin related conditioning qualities.

<u>Ingredients:</u>	<u>% W/W</u>
1. Ritapro 100	7.50
2. Stearyl Alcohol	2.50
3. Mineral Oil (65/75 saybolt)	6.00
4. Ritachol	5.00
5. Ritasol	2.00
6. Forlan L	1.00
7. BHA	0.10
8. Sorbic Acid	0.20
9. Propylparaben	0.10
10. Distilled Water	70.20
11. Acritamer 941	0.10
12. Glycerin	5.00
13. Methylparaben	0.20
14. Triethanolamine (50%)	0.20

**Compounding Procedure:**

Weigh and add items 1 through 9 into a container and heat to 70-73C. Weigh and add item 10 into another container and slowly sprinkle in item 11 while stirring with a variable speed agitator capable of imparting relatively high shearing stress. Stir until the Acritamer 941 has thoroughly dispersed and hydrated and no lumps can be seen or felt.

Add the remaining ingredients and heat to 70-73C. When the blend containing Ritapro 100 and the blend containing water are both at 70-73C, add the water-containing blend to the blend containing the Ritapro 100 while stirring continuously to ensure adequate emulsification. Begin cooling. Cool to 25-30C and package.

SOURCE: R.I.T.A. Corp.: Formulation H-89-A-5

Environmental Protective Cream

	<u>% Weight</u>
Phase A:	
Octyl Methoxycinnamate (Parsol MCX)	5.00
Tocopheryl Acetate	2.50
PVP/Eicosene Copolymer (Ganex V220)	2.00
PEG-20 Methyl Glucose Sesquistearate (Glucamate SSE-20)	1.50
Methyl Glucose Sesquistearate (Glucate SS)	1.00
Aloe Vera Gel	1.00
Glyceryl Stearate (Emerest 2400)	0.50
Dimethicone	0.50
Phase B:	
Water	83.90
d1-Panthenol	0.50
Carbomer-934 (Carbopol 934)	0.25
Phase C:	
Triethanolamine	0.50
Phase D:	
Germaben II-E	0.75
Fragrance	0.10

**Procedure:**

Heat Phase A and Phase B separately to 75C. Add Phase A to Phase B with vigorous agitation. Transfer to a paddle-type mixer and add Phase C to the hot batch. Let cool. When the batch temperature drops below 45C, add Phase D to the batch with mixing

Therapeutic Humectant Creme

	<u>% Weight</u>
Phase A:	
Water	72.00
Stearamidopropyl PG-Dimonium Chloride Phosphate (Phospholipid P-TS)	3.00
Glycerin, 99%	10.00
Steareth-20	0.20
Phase B:	
Steareth-2	1.30
Cetyl Alcohol	2.50
Myristyl Myristate	3.50
C12-C15 Alcohols Benzoate (Finsolv TN)	3.00
Hexyl Laurate	2.50
Dimethicone, 10 cps.	1.00
Phase C:	
Germaben II-E	1.00

**Procedure:**

Prepare Phases A and B separately and heat to 70C with mixing. Add Phase B to Phase A and continue to vigorously mix, without air entrainment, for 10 minutes. Stir-cool to 45C, add Germaben II-E and package.

**SOURCE:** Sutton Laboratories: Suggested Formulas

European Night Cream

This formulation is a heavy system to enhance moisturizing.

<u>Materials:</u>	<u>Part/Wt(%)</u>
Part A:	
Glyceryl Stearate	6.0
Petrolatum	6.0
PEG-7 Hydrogenated Castor Oil	4.0
Clearlan	2.0
Isopropyl Palmitate	8.0
Mineral Oil	8.0
Softisan 378	3.0
Squalene	0.6
Part B:	
Hexylene Glycol	4.0
Magnesium Sulfate	0.5
Water	46.1
Part C:	
SF1173	3.0
SF1228	3.0
SS4267	2.5
Octyl Methoxy Cinnamate	3.3

Procedure:

1. Heat Part A and Part B to 75C.
2. Add Part B to Part A with high shear mixing. Cool to 55C.
3. Add Part C with continued mixing and cool to 25C

SOURCE: GE Silicones: Personal Care Formulary: Formula SP102

Hand Cream

<u>Ingredient:</u>	<u>% As Supplied</u>
(Water	74
(Glycerol	12
A(Aculyn 22	1
(Triethanolamine	0.5
(Mineral Oil	2
B(Cetyl Alcohol	10
(Ethomeen C-25	0.5

Mixing Procedure:

Combine the ingredients of parts A and B by adding in the stated order with moderate subsurface agitation. Heat each part separately to 70C(158F). For the hand care products, add part B to part A with high-shear agitation.

SOURCE: Rohm and Haas Co.: Suggested Formulation

Extra Body Conditioning Cream

<u>Ingredients:</u>	<u>% w/w</u>
Water	90.05
Stearamidopropyl Dimethylamine (Tegamine 18)	1.50
Citric Acid-Monohydrate	0.60
Glyceryl Stearate S.E. (Tegin)	3.00
Ceteth-2	1.50
Cetyl Alcohol	0.50
Sodium Chloride	0.60
Behenoxy Dimethicone (Abil Wax 2440)	0.35
Propylene Glycol	1.00
Quaternium-80 (Abil Quat 3272)	0.50
Dimethicone Copolyol (Abil B 8851)	0.40
Color, Preservatives, Fragrance	Q.S.
<u>Procedure:</u>	
1. Heat the water to 70-75C. Add the Tegamine 18. Disperse well. Add the Citric Acid. Mix well. NOTE: To facilitate mixing, some water can be held from the batch to dissolve the Citric Acid prior to adding to the batch.	
2. Add the Ceteth-2 Cetyl Alcohol, Sodium Chloride and Abil Wax 2440. Mix.	
3. Begin cooling. Cool to 45-50C while mixing. Mix the Propylene Glycol and the Abil Quat 3272 together and add to the batch. Mix.	
4. Switch to sweep mixer. Cool to 35-40C. Add the Abil B 8851, Color, Preservatives, and Fragrance. Mix.	
5. Continue cooling. Fill.	
Formulation GCC 13-37	

Lecithin Cream  
W/O Emulsion

<u>Ingredients:</u>	<u>% w/w</u>
<u>Phase A:</u>	
Cetyl Dimethicone Copolyol (Abil EM-90)	2.00
Polyglyceryl-4 Isostearate (Isolan GI-34)	0.50
Mineral Oil	19.00
Octyl Stearate (Tegosoft OS)	2.50
Decyl Oleate (Tegosoft DO)	2.00
Microcrystalline Wax	1.20
Hydrogenated Castor Oil	0.80
<u>Phase B:</u>	
Preservatives	Q.S.
Water	68.10
Lecithin	2.15
Glyceryl Stearate S.E. (Tegin)	1.25
Sodium Chloride	0.50
<u>Phase C:</u>	
Fragrance	Q.S.

SOURCE: Goldschmidt Chemical Corp.: Suggested Formulations

Greaseless Hand Cream

This non-mineral oil cream leaves the skin soft and smooth without being oily or greasy. It is pH balanced to match the pH of the skin with Patlac LA.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Cetyl Alcohol	6.00
2. Glyceryl Stearate	5.00
3. Patlac IL	3.50
4. Supersat AWS 4	1.50
5. Propylparaben	0.05
Part B:	
6. Distilled Water	80.06
7. Glycerin	3.50
8. Methylparaben	0.10
9. Sodium Hydroxide (20% Solution)	0.29

Compounding Procedure:

Heat Parts A and B to 165F. Add Part A to Part B with mixing. Maintain temperature and mixing for 10 minutes. Cool with mixing. Adjust pH to 5.5 with Sodium Hydroxide. Adjust pH to 5.5.  
Formulation HB-89-L-13

W/O Night Creme

A rich water in oil emulsion to be used as a night treatment. This is also an excellent w/o vehicle for additives.

<u>Ingredients:</u>	<u>% W/W</u>
1. Ritachol	20.00
2. Pationic CSL	7.20
3. Grilloten LSE 87K	1.00
4. Shebu	1.50
5. Glycerin	5.00
6. Distilled Water	65.30
7. Color, Perfume, Preservative	QS

Compounding Procedure:

Combine items 1-4 and heat to 70C. Combine items 5 and 6 and heat to 70C. Combine both phases and cool with mixing to 45C, add perfume, preservative and color.

Formulation HB-89-S-5

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Hand Cream

<u>Ingredients:</u>	<u>% by Weight</u>
Deionized Water	90.60
Neobee M-5	3.75
Kessco Cetyl Alcohol	2.00
Stearyl Alcohol	1.25
Petrolatum	1.15
Drempol 3-1-0	0.50
Sodium Stearate	0.40
Propyl Paraben	0.20
Methyl Paraben	0.15
Fragrance	Q.S.

Mixing Procedure:

## Phase A:

Add D.I Water to a suitable mixing vessel and heat to 50C. Begin agitation and disperse Sodium Stearate. Continue heating until temperature reaches 65C then add Methyl Paraben. Maintain temperature at 65C then continue mixing.

## Phase B:

Add Kessco Cetyl Alcohol, Stearyl Alcohol, Drempol 3-1-0, Petrolatum, Neobee M-5 and Propyl Paraben to a suitable mixing vessel. Begin agitation and heat to 70C.

Add Phase B to Phase A with quick agitation. Continue quick agitation for 10-15 min., making sure temperature doesn't exceed 70C. Slow agitation to moderate speed and begin cooling until temperature reaches 40C. Add Fragrance, and color if desired. Cool to 25C and fill.

Typical Properties:

Appearance: White, viscous cream

Viscosity @ 77F: 4000-5500 cps

pH (as is): 6-7

Passed three cycles of freeze thaw

Passed two weeks of stability testing at 50C

Comment:

Silky, dry feeling cream

SOURCE: Stepan Co.: Formulation No. 591

**Hand and Nail Cream**

<b><u>Ingredients:</u></b>	<b><u>% w/w</u></b>
Phase A:	
Polyglyceryl-4 Isostearate (and) Cetyl Dimethicone	5.00
Copolyol (and) Hexyl Laurate (Abil WE-09)	
Mineral Oil	6.00
Beeswax	0.80
Hydrogenated Castor Oil	0.80
Cetyl Dimethicone (Abil Wax 9801)	0.50
Behenoxy Dimethicone (Abil Wax 2440)	0.20
Cyclomethicone (Abil B 8839)	4.50
Cetyl Octanoate (Tegosoft CO)	2.50
Cetearyl Octanoate (Tegosoft Liquid)	2.50
Phase B:	
Water	70.20
Sodium Chloride	0.50
Quaternium-80 (Abil Quat 3272)	0.50
Propylene Glycol	5.00
Urea	0.50
Preservatives	Q.S.
Phase C:	
Fragrance	Q.S.

**Precedure:**

1. Add the components of Phase A. Heat while mixing to 80C to incorporate the waxes. Cool to 50C.
2. Heat Phase B to 50C. Add B to A slowly with a low energy mixer. Maintain a smooth milky appearance at all times.
3. Cool to 35C with sweep mixer. Add fragrance.
4. Homogenize.

**SOURCE:** Goldschmidt Chemical Corp.: Suggested Formulation

**Hand Cream**

Oil Phase:	
Amersil VS-7158 (Cyclomethicone)	4.00%
Amersil L-45/1000 (Dimethicone)	1.50
PEG-20	2.00
Glucate IS (Methyl Glucose Sesquiosostearate)	3.00
Promulgen D (Cetearyl Alcohol and Ceteareth-20)	3.00
Cetal (Cetyl Alcohol)	3.00
Caprylic/Capric Triglyceride	2.00
Water Phase:	
Glucam E-20 Distearate (Methyl Gluceth-20 Distearate)	3.00
Glucam E-20 (Methyl Gluceth-20)	3.00
Amercell Polymer HM-1500 (Nonoxonyl Hydroxycellulose)	0.90
Deionized Water	74.60
Perfume and Preservative	q.s.

**Procedure:**

Prepare an aqueous solution of Amercell Polymer HM-1500 by adding it to water at room temperature with rapid stirring. When well dispersed, heat to 75C and mix until uniform. Use this solution as part of the water phase. Add remaining water phase ingredients. Heat the oil phase to 75C. Add water phase to oil phase with agitation. Continue to mix and cool to room temperature.

**SOURCE:** Amerchol Corp.: Suggested Formulation T70-112-1



### Hydroquinone Bleach Cream

This formulation is well designed to be applied morning and night to discolored areas of the skin and rubbed in well. It may be used under makeup. However, if no improvement is noticed after a time interval of two months, the product should be discontinued. This formulation contains a sun screen agent, which helps prevent the recurrence of the discolored spots when exposed to sunlight. The product should not be used on broken or irritated skin and contact with the eyes should be avoided. Sensitivity to the active ingredient, which may be experienced by some individuals, should be treated with discontinuance. The formulation contains Ritalan, which is 100% pure lanolin oil. Ritalan has been incorporated for its lubricating and emolliency attributes, as well as the fact that it is an excellent moisturizing agent for those persons with dry skin. Ritachol has also been added for emolliency, as well as auxiliary emulsification properties.

<u>Ingredients:</u>	<u>% W/W</u>
1. Glyceryl Monostearate (self-emulsifying)	6.15
2. Ritapro 165	4.75
3. Ritachol	5.00
4. Ritalan	1.00
5. Methylparaben	0.10
6. Propylparaben	0.05
7. Distilled Water	78.05
8. Sodium Bisulfate	0.20
9. Sodium Metabisulfite	0.20
10. Forlan C-24	0.50
11. Citric Acid (to pH of 3.5 to 4.0)	QS
12. Hydroquinone	2.00
13. Octyl Dimethyl Paba	2.00
14. Perfume	QS

#### Compounding Procedure:

Weigh items 1-4, 6 and 13 into a container and heat mixture to 70-73C with agitation. Weigh items 7-10 into a container and heat mixture to 70-73C with agitation. Add phase 2 to phase 1 with agitation. Cool mixture to 45C. Add remaining ingredients (5, 11, 12 and 14) to batch\*. Cool to 25-30C with agitation. Pour into containers.

#### \*NOTE:

It may be desirable to pass material through ointment mill or equivalent at this point.

SOURCE: R.I.T.A. Corp.: Formulation HB-89-R-19

**Moisturizing Cream**

The moisturizing cream formulation given here forms a smooth, creamy textured product. Ritaderm has been added to help alleviate skin dryness, roughness and chapping by imparting the qualities at both the lipid layer of the skin and the natural moisturizing factors. The product leaves skin soft, smooth, dry and dewy fresh.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Ritachol 1000	3.00
2. Rita CA	3.00
3. Rita GMS	1.50
4. Stearic Acid (triple pressed)	2.25
5. Ritachol	2.00
6. Ritaderm	10.00
7. Mineral Oil, 70 wt.	4.00
8. BHA	0.10
9. Propylparaben	0.10
Part B:	
10. Distilled Water	68.55
11. Acritamer 940	0.10
12. Glycerin	5.00
13. Methylparaben	0.10
14. Triethanolamine (50%)	0.20
15. Quaternium 15	0.10
16. Perfume	QS

**Compounding Procedure:**

Weigh and add items 1-9 into a container and begin stirring and heating. Heat to 70-73C while stirring continuously. Weigh and add item 10 into a container and begin stirring. The use of an agitator equipped with a stirrer capable of imparting relatively high shearing stress is recommended. Add item 11 and stir until a homogeneous lump-free dispersion results. Add items 12, 13 and 14 and begin heating, heat to 70-73C. When both Parts A and B are at 70-73C, add Part B to Part A while stirring continuously. When all of Part B has been added, begin cooling. Cool to 40-43C and add the remaining ingredients. Continue stirring and cooling to 35C. Package.

SOURCE: R.I.T.A. Corp.: Formulation HB-89-R-25

**Moisturizing Cream**

	<u>% Weight</u>
Phase A:	
Water	57.40
Glycerin	3.00
Carbomer-940 (Carbopol 940)	0.70
Disodium EDTA	0.10
Methylparaben	0.25
Phase B:	
PEG-8 (Carbowax)	5.00
Propylene Glycol Ceteth-3 Acetate (Hetester PCA)	8.00
PEG-40 Stearate (Myrj 52S)	0.50
Cetyl Alcohol	1.00
Propylparaben	0.10
Octyldodecanol (Eutanol G)	4.00
Stearyl Alcohol	1.00
Coco-Caprylate/Caprate (Cetiol LC)	3.00
Mineral Oil (Carnation Mineral Oil)	8.00
Glyceryl Stearate SE (Cerasynt Q)	3.00
Perfluoropolymethylisopropylether (Formblin HC/25)	2.00
Phase C:	
Triethanolamine, 99%	0.70
Phase D:	
Water	2.00
Germall 115	0.25

**Procedure:**

Heat Phase A to 80C. Heat Phase B to 80C. Add Phase B to Phase A. Cool to 75C and add Phase C. Continue cooling to 30C and add Phase D.

**Moisturizing Cream, Oil-Free**

	<u>% Weight</u>
Phase A:	
Hydrogenated Soy Glyceride (Myverol 18-06)	4.00
Stearic Acid (Emersol 132)	4.00
Isopropyl Palmitate	6.00
Cetyl Alcohol, NF	2.00
Propylparaben	0.10
Phase B:	
Water	77.00
Propylene Glycol	5.20
Methylparaben	0.25
Triethanolamine	0.70
Phase C:	
Germall 115	0.25
Tocophersolan, 20% Solution (Vitamin E TPGS)	0.50

**Procedure:**

Heat Phase A and Phase B separately to 80C with propeller mixing. Add Phase A to Phase B mixing well while cooling to 50C. Product will become viscous at 52C and mixing must be adjusted. Add Phase C while mixing. Force cool to room temperature.

**SOURCE: Sutton Laboratories: Suggested Formulations**

**Moisturizing Cream**  
**Cold Process**  
**W/O**

**Ingredients:**

% w/w

**Phase A:**

Polyglyceryl-4 Isostearate (and) Cetyl Dimethicone Copolyol (and) Hexyl Laurate (Abil WE-09)	5.0
Mineral Oil	5.0
Caprylic/Capric Triglycerides (Tegosoft CT)	5.0
Isopropyl Myristate (Tegosoft M)	5.0
Silica (Aerosil R821)	0.5

**Phase B:**

Water	77.9
Sodium Chloride	0.8
Hydroxyethylcellulose (Tylose H20)	0.8
Preservatives	Q.S.
Perfume	Q.S.
Color	

**Procedure:**

1. Mix the oils of Phase A together. Slowly add the silica. Mix well.
2. Dissolve the sodium chloride in the water. With fast agitation, add the Hydroxyethylcellulose. Mix until uniform.
3. Add Phase B slowly into Phase A with agitation.
4. Homogenize.
5. Preservatives, perfume and color can be added at anytime.

**Silicone Skin Protection Cream**  
**(W/O Emulsion)**

**Ingredients:**

% w/w

**Phase A:**

Cetyl Dimethicone Copolyol (Abil EM-90)	2.0
Cetyl Dimethicone (Abil Wax 9801)	5.0
Polyglyceryl-4 Isostearate (Isolan GI-34)	1.0
Dimethicone (Abil 100)	3.0
Caprylic/Capric Triglycerides (Tegosoft CT)	4.0
Decyl Oleate (Tegosoft DO)	6.0
Hydrogenated Castor Oil	0.8
Microcrystalline Wax	1.2

**Phase B:**

Water	76.5
Sodium Chloride	0.5

**Phase C:**

Fragrance	Q.S.
-----------	------

**Procedure:**

1. Add the components of Phase A. Heat while mixing to 80C to incorporate the waxes. Cool to 50C.
2. Heat Phase to 50C. Add B to A slowly with a low energy mixer. Maintain a smooth milky appearance at all times.
3. Cool to 35C with sweep mixer. Add fragrance.
4. Homogenize.

**SOURCE:** Goldschmidt Chemical Corp.: Suggested Formulations

**Moisturizing Cream with Aloe Vera**

This formula is a soft, creamy-textured oil in water emulsion containing Ritalan C for emolliency and lubricating properties. This formulation contains Ritaderm and Ritaloe 200 for skin conditioning and moisturizing.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	68.20
2. Acritamer 941	0.10
3. Methylparaben	0.10
4. Ritachol 1000	12.00
5. Ritalan C	1.00
6. Mineral Oil 65/70	10.00
7. Ritachol	3.00
8. Ritaderm	5.00
9. Propylparaben	0.10
10. BHA	0.10
11. Triethanolamine (50%)	0.20
12. Ritaloe 200	0.05
13. Perfume	QS
14. Color	QS
15. Quaternium 15	0.15

**Compounding Procedure:**

Weigh and add the distilled water into a container and begin mixing. A variable speed agitator equipped with a stirrer capable of imparting relatively high shearing stress is recommended. Sprinkle in the Acritamer 941, while stirring continuously. Begin heating, while continuing to stir. Heat to 70-73C and add item 3 (Methylparaben). Stir until the Acritamer 941 has been dispersed, so that no lumps can be seen or felt. Add items 11 and 12 into container and begin stirring and heating to 70-73C. When both blends are at 70-73C, add the water-containing blend to the blend containing the Ritaderm. When all the water-containing blend has been added, begin cooling the batch. Cool to 40-43C and add the remaining ingredients. Cool to 25-30C and package into suitable containers.

SOURCE: R.I.T.A. Corp.: Formula HB-89-R-29

**Multivitamin Moisturizing Cream****Ingredients:****% by Wt.****Part I:**

Deionized Water	68.36
Propylene Glycol, USP	4.40
Carbopol 940	0.25
Methyl Parasept	0.25
Dexpanthenol (Code #63909)	1.00
Biotin, FCC (Code 63344)	0.05

**Part II:**

Cetyl Alcohol	1.50
Super Hartolan	1.00
Carnation Mineral Oil	9.00
Emersol 132	2.38
Witcamide MAS	1.00
Sesame Oil, USP	4.20
Propyl Parasept	0.10
Silicone 200 Fluid, 350 cs.	2.00
Vitamin E Acetate, USP-FCC (Code 60526)	1.00
Tenox BHT	0.06

**Part III:**

Triethanolamine, 98%	0.90
----------------------	------

**Part IV:**

Vitamin A & D3 Blend (5:1 Ratio) (Code 63857)	1.00
Perfume Oil	0.30

**Part V:**

Germall 115	0.25
Deionized Water	1.00

**Procedure:**

Dissolve Carbopol 940 in water. Add remaining ingredients in Part I. Heat Part I and Part II to 75C. Add Part II to Part I mixing with an Eppenbach homomixer. Follow with the addition of Triethanolamine. Transfer batch to paddle type mixer, cool to 40C and then add Part IV, Part V and Part IV. Mix well between each addition until homogeneous.

**SOURCE:** Roche Chemical Division: Formula SC 410

Multivitamin Night CreamIngredients:% by Wt.

## Part I:

Stearyl Alcohol	15.00
White Perfecta Petrolatum	7.00
Cetyl Alcohol, NF	1.50
White Beeswax	2.00
Hystrene 9718	1.00
Deltyl Prime	3.00
Propyl Parasept	0.05
Vitamin E Acetate, USP-FCC (Code 60526)	0.55
Tenox BHT	0.065

## Part II:

Myrj 52	4.00
Propylene Glycol	12.00
Methyl Parasept	0.20
Versene NA2	0.01
Pyridoxine Hydrochloride, USP-FCC (Code 60650)	1.10
d1-Panthenol, Cosmetic Grade (Code 63920)	1.15
Deionized Water	50.525

## Part III:

Vitamin A & D3 Blend (5:1 Ratio) (Code 63857)	0.65
---	------

## Part IV:

Perfume Oil	0.20
-------------	------

Procedure:

Heat Part I to 75C. Heat Part II to 70C and mix until solution is complete.

Add Part II to Part I slowly with agitation. Cool with slow mixing to 40C.

Add Part III and then Part IV, mixing well between each addition until homogeneous.

Preservative level may need adjustment to meet individual challenge test.

SOURCE: Roche Chemical Division: Formula SC 409

**Night Cream**

This is a super rich emollient cream for normal/dry skin. This formulation is non-oily with a silky afterfeel. Lexquat AMG-BEO is the primary cationic emulsifier in this system.

	% (w/w)
Phase A:	
Deionized Water	62.60
Cellulose QP-15,000H (Hydroxyethyl Cellulose)	0.90
Glycerine	3.00
Propylene Glycol USP	2.00
Lexgard M (Methylparaben)	0.20
Lexquat AMG-BEO (Behenamidopropyl Dihydroxypropyl Dimonium Chloride)	7.00
Phase B:	
Lexol PG-865 (Propylene Glycol Dicaprylate/Dicaprate)	15.00
Lexemul 55G (Glyceryl Stearate)	4.50
Myristyl Myristate	1.00
Stearyl Alcohol	2.00
Cetyl Alcohol	1.50
Lexgard P (Propylparaben)	0.10
Phase C:	
Fragrance	0.20

**Procedure:**

Charge batch vessel with water (Phase A). Begin mixing and heating to 78C+-2C. Dust in Cellulose. When completely hydrated, add remaining material of Phase A to batch. Combine Phase B in a separate vessel and heat to 78C+-2C. When uniform slowly add Phase B to Phase A maintaining mixing and temperature. Allow to mix at 78C for 15 minutes. Cool. At 40C, add Phase C to batch. Cool to room temperature.

**Observations:**

pH (direct): 4.9

Viscosity: 55,000 cps

SOURCE: Inolex Chemical Co.: Formulation SK-106

**Facial Moisture Creme**

This elegant formulation provides high moisturization, excellent rub off resistance, and is ideally suited for overnight skin care.

	%
Part A:	
Phospholipid SV	3.00
Methyl Paraben	0.25
Steareth-20	0.20
Water	81.50
Part B:	
Steareth-2	1.30
Cetearyl Alcohol	4.00
Myristyl Myristate	4.00
Isopropyl Myristate	4.00
Dimethicone (100 cS)	1.00
Lanolin Alcohol	0.50
Propyl Paraben	0.25

**Procedure:**

Heat both phases to 65C, and homogenize the oil phase into the water phase. Stir-cool to 40C and add fragrance, coloring or preservative as required.

SOURCE: Mona Industries, Inc.: Phospholipid SV Formulation



Night Cream

Lexquat AMG-IS is the primary cationic emulsifier in this formulation. It can be used for make-up removal and will create a rich, moisture-enhancing yet light-feeling effect which is invisible on the skin.

	% (w/w)
Phase A:	
Deionized Water	57.50
Cellose QP-15,000H (Hydroxyethyl Cellulose)	1.00
Glycerine	3.00
Propylene Glycol	2.00
Lexgard M (Methylparaben)	0.20
Lexgard AMG-IS (Isostearylamidopropyl Dihydroxypropyl Dimonium Chloride)	12.00
Phase B:	
Lexol PG-865 (Propylene Glycol Dicaprylate/Dicaprate)	15.00
Lexemul 55G (Glyceryl Stearate)	4.50
Myristyl Myristate	1.00
Stearyl Alcohol	2.00
Cetyl Alcohol	1.50
Lexgard P (Propylparaben)	0.10
Phase C:	
Fragrance	0.20

Procedure:

Charge batch vessel with water (Phase A). Begin mixing and heating to 78C+-2C. Dust in Cellose. When completely hydrated, add remaining material of Phase A to batch. Combine Phase B in a separate vessel and heat to 78C+-2C. When uniform slowly add Phase B to Phase A maintaining mixing and temperature. Allow to mix at 78C for 15 minutes. Cool. At 40C, add Phase C to batch. Cool to room temperature.

SOURCE: Inolex Chemical Co.: Formula SK-104

Light Texture Hand Creme

This high humectant creme provides a non-greasy, long lasting soothing feel.

	%
Part A:	
Phospholipid SV	3.00
Steareth-20	0.45
Glycerin	5.00
Methyl Paraben	0.25
Water	77.75
Part B:	
Steareth-2	0.80
Cetearyl Alcohol	3.50
Myristyl Myristate	3.50
Finsolv TN (Finetex)	1.50
Isopropyl Palmitate	3.00
Dimethicone (100 cS)	1.00
Propyl Paraben	0.25

Procedure:

Heat both phases to 65C, and homogenize the oil phase into the water phase. Stir-cool to 40C and add fragrance, coloring or preservative as required.

SOURCE: Mona Industries: Phospholipid SV Formulations

O/W Hand Cream-AIngredients:

	<u>%w/w</u>
Phase A:	
Steareth-25 (Emulgator 2568)	2.0
Glyceryl Stearate (Tegin M)	5.0
Stearyl Alcohol	2.0
Octyl Octanoate (Tegosoft EE)	6.0
Mineral Oil	15.0
Phase B:	
Glycerin	3.0
Water	65.0
Sodium Lactate (and) Sodium PCA (and) Glycine (and) Fructose (and) Urea (and) Niacinamide (and) Inositol (and) Sodium Benzoate (and) Lactic Acid (Lactil)	2.0
Phase C:	
Fragrance	Q.S.

O/W Hand Cream-BIngredients:

	<u>%w/w</u>
Phase A:	
Steareth-25 (Emulgator 2568)	2.0
Glyceryl Stearate (Tegin M)	5.0
Stearyl Alcohol	2.0
Mineral Oil	8.0
Stearoxy Dimethicone (Abil Wax 2434)	3.0
Octyl Stearate (Tegosoft OS)	10.0
Phase B:	
Glycerin	3.0
Water	65.0
Sodium Lactate (and) Sodium PCA (and) Glycine (and) Fructose (and) Urea (and) Niacinamide (and) Inositol (and) Sodium Benzoate (and) Lactic Acid (Lactil)	2.0
Phase C:	
Fragrance	Q.S.

Procedure:

1. Combine the ingredients of Phase A. Heat to 70C.
2. Mix Phase B. Heat to 60C.
3. Combine A/B. Homogenize. Cool at 45C.
4. Add fragrance. Sweep mix and cool to 30C. Dispense.

SOURCE: Goldschmidt Chemical Corp.: Suggested Formulations

O/W Hand Cream-C

<u>Ingredients:</u>	<u>%w/w</u>
Phase A:	
Steareth-25 (Emulgator 2568)	2.0
Glyceryl Stearate (Tegin M)	5.0
Stearyl Alcohol	2.0
Caprylic/Capric Triglycerides (Tegosoft CT)	12.0
Cetearyl Octanoate (Tegosoft Liquid)	3.0
Tocopherol Acetate	1.0
Avocado Oil	5.0
Phase B:	
Glycerin	3.0
Water	65.0
Sodium Lactate (and) Sodium PCA (and) Glycine (and) Fructose (and) Urea (and) Niacinamide (and) Inositol (and) Sodium Benzoate (and) Lactic Acid (Lactil)	2.0
Phase C:	
Fragrance	Q.S.

O/W Hand Cream-D

<u>Ingredients:</u>	<u>%w/w</u>
Phase A:	
Steareth-25 (Emulgator 2568)	2.0
Glyceryl Stearate (Tegin M)	5.0
Stearyl Alcohol	2.5
Octyl Stearate (Tegosoft OS)	10.0
Caprylic/Capric Triglycerides (Tegosoft CT)	7.0
Tocopherol Acetate	1.0
Avocado Oil	5.0
Decyl Oleate (Tegosoft D0)	7.0
Phase B:	
Glycerin	3.0
Water	55.0
Sodium Lactate (and) Sodium PCA (and) Glycine (and) Fructose (and) Urea (and) Niacinamide (and) Inositol (and) Sodium Benzoate (and) Lactic Acid (Lactil)	2.0
Phase C:	
Fragrance	Q.S.

Procedure:

1. Combine the ingredients of Phase A. Heat to 70C.
2. Mix Phase B. Heat to 60C.
3. Combine A/B. Homogenize. Cool at 45C.
4. Add fragrance. Sweep mix and cool to 30C. Dispense.

SOURCE: Goldschmidt Chemical Corp.: Suggested Formulations

Pearly Foundation Cream

This base make-up, foundation-type cream is typical of products with a high pigment load. The function of this cream is to create an appearance similar to the skin itself. Here, a pearl pigment helps to reproduce the natural luster of the skin.

<u>Phase:</u>	<u>Ingredients:</u>	<u>%wt.</u>
A	Laneth-10 Acetate (Solulan 98)	3.00
	Isopropyl Lanolate (Amerlate P)	5.50
	Acetylated Lanolin Alcohol (Acetulan)	5.30
	Glyceryl Stearate SE (Tegin)	3.50
	Stearic Acid	2.70
	Antimicrobials (oil soluble)	q.s.
B	Antioxidants	q.s.
	Propylene Glycol	5.00
	Triethanolamine	1.00
	Water (q.s. to 100%)	64.00
	Antimicrobials (water soluble)	q.s.
	Fragrance	q.s.
C	Flamenco Ultra Silk	9.00
	Cloisonne' Super Bronze 240Z	1.00

Procedure:

- I. Heat Phases A and B in separate vessels to 80+-3C.
- II. Mix Phase B into Phase A. Then cool to 40+-3C. At this point add Phase C and mix until the pigment is well dispersed.
- III. Continue mixing and fill.

Color: Tan to match standard

Odor: Characteristic to match standard

Appearance: Pearly to match standard

Texture: Creamy

Identity: Oil/Water Emulsion

Viscosity: 13,700+-1000 cps

pH: 7.7+-0.5

Specific Gravity: 1.1+-0.1

SOURCE: The Mearl Corp.: Formula CLF-921966

Protective Day Cream for Normal Skin

<u>Ingredients:</u>	<u>% by Wt.</u>
Part I:	
Parsol 1789	1.50
Parsol MCX	2.00
Robane	1.00
Emersol 132	2.50
Cetyl Alcohol, NF	1.00
Stearyl Alcohol, NF	0.50
Klearol Mineral Oil	8.00
Lipovol ALM	5.00
Myverol 18-00	2.50
Spermwax	2.00
Delyl Extra	4.00
Tenox BHA	0.05
Propyl Parasept	0.10
Part II:	
Deionized Water	58.55
Propylene Glycol	4.00
Methyl Parasept	0.25
Carbopol 940	0.25
Miranol CM Conc. N.P.	0.50
dl-Panthenol, Cosmetic Grade (Code 63920)	0.50
Ajidew N-50	1.00
Sequestrene Na2	0.20
Part III:	
Triethanolamine, 98%	0.80
Part IV:	
Collasol	2.00
Part V:	
Vitamin E Acetate, USP-FCC (Code 60526)	1.50
Perfume Oil	0.30

Procedure:

Mix together all ingredients in Part II except the Carbopol. Heat to 85C. Sift in Carbopol mixing with an Eppenbach homomixer until uniform. Heat Part I to 85C and Part I to Part II. Follow with addition of Triethanolamine while still using the Eppenbach. Stir with a paddle mixer until temperature reaches 40C. Add Part IV and Part V. Continue mixing until homogeneous.

SOURCE: Roche Chemical Division: Formula SC 412

**Skin Conditioning Cream**

White, glossy, heavy viscosity cream. Humectancy and smooth, silky afterfeel attributed to Kytamer PC and Glucam E-10. Amerlate P helps rub-in of cream onto skin by providing lubricity properties. Primary emulsification of system due to highly efficient, mild, nonionic emulsifier pair of Glucamate SSE-20 (o/w) and Glucate SS (w/o).

**Water Phase:**

Kytamer PC (Chitosan PCA)	0.5%
Glucam E-10 (Methyl Gluceth-10)	5.0
Glucamate SSE-20 (PEG-20 Methyl Glucose Sesquistearate)	1.0
Deionized Water	65.5

**Oil Phase:**

Promulgen G (Stearyl Alcohol and Cetareth-20)	5.0
Amerchol L-101 (Mineral Oil and Lanolin Alcohol)	4.0
Amerlate P (Isopropyl Lanolate)	3.0
Glucate SS (Methyl Glucose Sesquistearate)	1.0
Mineral Oil	15.0
Perfume and Preservative	q.s.

**Procedure:**

Disperse Kytamer PC in water with highspeed agitation. When completely dispersed heat to 75C with continuous mixing until clear and uniform. Add Glucamate SSE-20 while maintaining temperature of water phase at 75C. Heat oil phase to 75C. Add water phase at 75C to oil phase at 75C with good agitation. Continue mixing while slowly cooling to room temperature. Add perfume below 50C.

Formula T60-28-1

**Greaseless Night Cream**

This luxurious w/o night cream provides long-lasting moisturization in a simple and basic vehicle which leaves the skin feeling soft, smooth and silky without the greasy aesthetics often encountered in night cream formulations. Glucate IS is a powerful w/o emulsifier which combines the large internal water phase into the much smaller external oil phase. Glucam E-10 is well known as a efficient humectant and emollient.

**Phase A:**

Water	78.3%
Glucam E-10 (Methyl Gluceth-10)	1.0

**Phase B:**

Mineral Oil, 70 vis.	15.0
Magnesium Sulfate Trihydrate	0.7
Glucate IS (Methyl Glucose Sesquiostearate)	5.0

**Phase C: Preservative**

q.s.

**Phase D: Fragrance**

q.s.

**Procedure:** Heat phase A to 80-82C with mixing. Heat phase B to 80-82C with mixing. When both phases are homogeneous at 80-82C, increase the mixing speed and slowly add phase A to phase B. Continue mixing until the combined phases have cooled to 40-42C. Add phase C followed by phase D. Cool further to 28-32C. Homogenize completed formula until a uniform glossy appearance is developed.

SOURCE: Amerchol Corp.: Formulation T72-84-4

Skin Cream

A firm white cream which spreads easily on the skin and provides longlasting moisturization without greasiness.

<u>Part:</u>	<u>Ingredient:</u>	<u>Wt. %</u>
A	Deionized Water	75.8
	Hydroxypropyl Methylcellulose Methocel 40-100	0.2
	Tetrasodium EDTA	0.1
	Triethanolamine, 50%	0.1
B	PPG-10 Butanediol	3.0
	Benzyl Laurate	4.0
	Mineral Oil	4.0
	Cetearyl Alcohol (and)	
	Cetareth-20	6.0
	Stearic Acid	2.0
C	Glycol Stearate	2.0
	Deionized Water	2.0
	Quaternium-15	0.2
	Propylene Glycol (and)	
	Diazolidinyl Urea (and)	
	Methyl Paraben (and)	
	Propyl Paraben	0.5
	Citric Acid, 50%	0.1

pH: 6.0-6.5

Viscosity: 600,000-620,000 cps (Brookfield TD @ 0.3 rpm)

38,000- 43,000 cps (Brookfield #4 @ 3 rpm)

Appearance: Firm, glossy white cream

Procedure:

Disperse the hydroxypropyl methylcellulose in the part A water, mixing for at least 10 minutes. Add the Na<sub>4</sub>EDTA and triethanolamine to initiate hydration. Begin heating part A to 65C. Blend the part B ingredients in a separate vessel, heating to 65C. Add part B to part A with good agitation to form the emulsion. Maintain agitation while cooling the batch to 40-45C. Dissolve the quaternium-15 in the part C water, and add to the batch. Add the Germaben II, and adjust pH with citric acid solution.

SOURCE: PPG Industries, Inc.: Formulation J-103

Skin Cream

A firm white cream which spreads easily on the skin and provides longlasting moisturization without greasiness.

<u>Part:</u>	<u>Ingredient:</u>	<u>Wt. %</u>
A	Deionized Water	75.8
	Hydroxypropyl Methylcellulose Methocel 40-100	0.2
	Tetrasodium EDTA	0.1
	Triethanolamine, 50%	0.1
B	PPG-10 Butanediol	3.0
	Benzyl Laurate	4.0
	Mineral Oil	4.0
	Cetearyl Alcohol (and)	
	Ceteareth-20	6.0
	Stearic Acid	2.0
C	Glycol Stearate	2.0
	Deionized Water	2.0
	Quaternium-15	0.2
	Propylene Glycol (and) Diazolidinyl Urea (and)	
	Methyl Paraben (and) Propyl Paraben Germaben II	0.5
	Citric Acid, 50%	0.1

pH: 6.0-6.5

Viscosity: 600,000-620,000 cps (Brookfield TD@0.3 rpm)

38,000- 43,000 cps (Brookfield #4@3 rpm)

Appearance: Firm, glossy white cream

Disperse the hydroxypropyl methylcellulose in the part A water, mixing for at least 10 minutes. Add the Na4EDTA and triethanolamine to initiate hydration. Begin heating part A to 65C. Blend the part B ingredients in a separate vessel, heating to 65C. Add part B to part A with good agitation to form the emulsion. Maintain agitation while cooling the batch to 40-45C. Dissolve the quaternium-15 in the part C water, and add to the batch. Add the Germaben II, and adjust pH with citric acid solution.

SOURCE: PPG Industries, Inc.: Formula J-103

Dry Skin Cream

<u>Part:</u>	<u>Ingredient:</u>	<u>Wt. %</u>
A	Deionized Water	79.3
	Triethanolamine	0.7
	Methyl Paraben	0.2
	Na4EDTA	0.2
	Cetearyl Alcohol (and) Ceteareth 20	8.0
B	Macol 124	8.0
	Dimethicone	0.5
	Masil SF-1000	0.5
	Mineral Oil	4.0
	Stearic Acid	2.5
C	Propylene Glycol	4.5
	Fragrance	0.1

pH: 6.0-6.5

Viscosity: 480,000 cps (Brookfield TE @ 0.6 rpm)

Appearance: White, glossy, firm cream

Pre-mix Part A ingredients; heat to 65C (150F). Pre-mix Part B; heat to 65C (150F). When both are uniform, add B to A with high-shear mixing. Sweep-cool to 40C (105F). Adjust pH, if necessary, with citric acid solution or triethanolamine solution. Add fragrance.

SOURCE: PPG Industries, Inc.: Formula J-101



Throat and Neck Cream

	<u>% Weight</u>
Phase A:	
Hexyl Laurate (Cetiol A)	12.50
Glyceryl Stearate (Cutina GMS)	3.00
PEG-40 Stearate (Emerest 2715)	3.00
Dimethicone, 100 cps. (Dow Corning 200 Fluid)	0.10
Cetearyl Alcohol (Lanette O)	2.80
PEG-6000 Distearate	0.30
Phase B:	
Propylene Glycol	6.00
Xanthan Gum	0.20
Magnesium Aluminum Silicate (Veegum)	0.40
Trisodium EDTA	0.05
Water	65.50
Phase C:	
Hydrolyzed Animal Elastin (Elastin CLR)	5.00
Germaben II	1.00
Fragrance	0.15

Procedure:

Mix and heat phase A to 70-75C. Preblend Veegum and xanthan gum. Slowly add to water while agitating at maximum available shear. Mix until smooth. Add the trisodium EDTA and the propylene glycol and heat to 70-75C. Add Phase A to Phase B at 70-75C, stir at temperature for 15 minutes. Mix while cooling to 40C, add Phase C. Cool to 30C and package.

Night Time Moisturizing Cream

	<u>% Weight</u>
Phase A:	
Mineral Oil	10.00
Octyl Palmitate (Ceraphyl 368)	2.00
Stearic Acid (Emersol 132)	4.00
Glyceryl Stearate SE (Cerasynt Q)	3.00
PEG-40 Stearate (Myrj 52S)	1.00
Dimethicone Copolyol (Abil B8852)	1.00
Lanolin Oil	0.50
Phase B:	
Water	74.75
Triethanolamine, 99%	1.30
Acrylates/Octylpropenamide Copolymer (Dermacryl-79)	1.00
Phase C:	
Carbomer-934 (Carbopol 934)	0.25
Phase D:	
Germaben II-E	1.00
Phase E:	
Fragrance	0.20

Procedure:

Heat water and triethanolamine to 80C. Slowly sift in Dermacryl-79 and mix until completely dissolved. Slowly sift in Carbopol 934. In separate vessel, combine phase A and heat to 80C until clear with mixing. Add Phase A to Phase B and mix thoroughly at 80C for 30 minutes. Cool to 40C, add Phase D and Phase E.

SOURCE: Sutton Laboratories: Suggested Formulations

**Under Make-Up Cream Base**

An oil/water emulsion with Cetyl Alcohol and Lactylate to soften and moisturize the skin.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Distilled Water	84.80
2. Propylene Glycol	5.00
3. Acritamer 934	0.20
Part B:	
4. Ritachol 2000	3.00
5. Cetyl Alcohol	2.00
6. Patlac IL	2.00
7. Pationic ISL	2.00
8. Pationic 138C	0.60
Part C:	
9. Triethanolamine (50%)	0.40
Part D:	
10. Color, Fragrance, Preservatives	QS
<b>Compounding Procedure:</b>	
Disperse the Acritamer in water and Propylene Glycol. Heat to 70C. Combine ingredients in Part B and heat to 70C. Add Part B to Part A. Mix until uniform. Add Part C and begin cooling. Cool to 30C. Add color, fragrance and preservatives. Package.	
Formulation H-89-A-16	

**Cleansing Cream**

A non-soap cleansing cream with Ritachol emollients and Lactylates for surfactancy, cleansing and moisturizing.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Mineral Oil, 65/70	15.00
2. Ritachol 1000	5.00
3. Ritachol	3.00
4. Patlac IL	3.00
5. Pationic CSL	2.00
6. Pationic 138C	1.00
7. Shebu Refined	1.00
Part B:	
8. Distilled Water	65.00
9. Glycerin	5.00
Part C:	
10. Preservatives	QS
11. Fragrance	QS
<b>Compounding Procedure:</b>	
Heat Parts A and B to 70C. Add Part A to Part B with agitation. Mix 15 minutes. Begin cooling with agitation. Cool to 45C. Add Part C. Cool to 27C and package.	
Formulation HB-89-R-33	

**SOURCE: R.I.T.A. Corp.: Suggested Formulations**

Vitamin Replenishing CreamIngredients:% by Wt.

## Part I:

Deionized Water	60.00
Carbopol 940	0.25
Propylene Glycol, USP	4.40
Methyl Parasept	0.25
Biotin, FCC (Code 63344)	0.05
dl-Panthenol, Cosmetic Grade (Code 63920)	1.00

## Part II:

Cetal	1.50
Super Hartolan	1.00
Carnation Mineral Oil	9.00
Emersol 132	2.40
Witcamide MAS	1.00
Sesame Oil, NF	4.20
Propyl Parasept	0.10
Silicone 200 Fluid	2.00
Butylated Hydroxytoluene	0.06
Vitamin E Acetate, USP-FCC (Code 60526)	1.00

## Part III:

Triethanolamine, 98%	0.90
----------------------	------

## Part IV:

Germall 115	0.25
Vitamin A & D3 Blend (5:1 Ratio) (Code 63857)	1.00

## Part V:

Perfume Oil (PA 62053)	0.30
------------------------	------

## Part VI:

Deionized Water	9.34
-----------------	------

Procedure:

- A. Sift Carbopol 940 into water and dissolve using Eppenbach homomixer. Add remaining ingredients of Part I stirring well after each addition. Heat to 75C.
- B. Weigh Part II ingredients into separate kettle. Heat to 75C. Stir until completely homogeneous.
- C. Add Part II into Part I using the Eppenbach homomixer. Stir for 5 minutes.
- D. Add Part III and stir vigorously.
- E. Cool to 35C while stirring with a paddle mixer. Add Part IV. Stir slowly to avoid aeration.
- F. Add Part V. Stir for 5 minutes.
- G. Q.S. with water.
- H. Transfer to suitable containers. Protect from light.

SOURCE: Roche Chemical Division: Formula SC 415

**W/O Body Cream-A**

<b><u>Ingredients:</u></b>	<b><u>%w/w</u></b>
Phase A:	
Polyglyceryl-3 Oleate (Isolan GO-33)	5.0
Hydrogenated Castor Oil	1.5
Beeswax	1.5
Decyl Oleate (Tegosoft DO)	12.0
Cetearyl Octanoate (Tegosoft Liquid)	12.0
Phase B:	
Water	65.5
Sodium Chloride	0.5
Urea	2.0
Phase C:	
Preservatives	Q.S.
Fragrance	Q.S.

**W/O Body Cream-B**

<b><u>Ingredients:</u></b>	<b><u>%w/w</u></b>
Polyglyceryl-3 Oleate (Isolan GO-33)	5.0
Hydrogenated Castor Oil	1.5
Beeswax	1.5
Jobba Oil	12.0
Octyl Stearate (Tegosoft OS)	12.0
Phase B:	
Water	65.5
Sodium Chloride	0.5
Sodium Lactate (and) Sodium PCA (and) Glycine (and) Fructose (and) Urea (and) Niacinamide (and) Inositol (and) Sodium Benzoate (and) Lactic Acid (Lactil)	2.0
Phase C:	
Preservatives	Q.S.
Fragrance	Q.S.

**Procedure:**

1. Heat the ingredients of Phase A to 70C. Mix until the waxes are completely dispersed.
2. In a separate vessel, combine the water and Sodium Chloride. Mix and heat to 70C.
3. Add the Sodium Chloride/Water to Phase A slowly with lightning agitation. Mix until uniform.
4. Cool to 50C with mixing.
5. Add remaining ingredients of Phase B and the preservative.
6. Homogenize.
7. Cool to 35-40C with sweep mixer and add the fragrance.

**SOURCE:** Goldschmidt Chemical Corp.: Suggested Formulations

W/O Body Cream-C

<u>Ingredients:</u>	<u>%w/w</u>
Polyglyceryl-3 Oleate (Isolan GO-33)	5.0
Hydrogenated Castor Oil	1.5
Beeswax	1.5
Avocado Oil	12.0
Caprylic/Capric Triglycerides (Tegosoft CT)	12.0
Phase B:	
Water	67.5
Sodium Chloride	0.5
Phase C:	
Preservatives	Q.S.
Fragrance	Q.S.

Procedure:

1. Heat the ingredients of Phase A to 70C. Mix until the waxes are completely dispersed.
2. In a separate vessel, combine the water and Sodium Chloride. Mix and heat to 70C.
3. Add the Sodium Chloride/Water to Phase A slowly with lightning agitation. Mix until uniform.
4. Cool to 50C with mixing.
5. Add remaining ingredients of Phase B and the preservative.
6. Homogenize.
7. Cool to 35-40C with sweep mixer and add the fragrance.

W/O Hand and Body Cream-C

<u>Ingredients:</u>	<u>% w/w</u>
Polyglyceryl-4 Isostearate (Isolan GI-34)	5.0
Hydrogenated Castor Oil	1.5
Beeswax	1.5
Jojoba Oil	12.0
Octyl Stearate (Tegosoft OS)	12.0
Phase B:	
Water	65.5
Sodium Chloride	0.5
Glycerin	2.0
Phase C:	
Preservatives	Q.S.
Fragrance	Q.S.

Procedure:

1. Heat the ingredients of Phase A to 70C. Mix until the waxes are completely dispersed.
2. In a separate vessel, combine the water and Sodium Chloride. Mix and heat to 70C.
3. Add the Sodium Chloride/Water to Phase A slowly with lightning agitation. Mix until uniform.
4. Cool to 50C with mixing.
5. Add remaining ingredients of Phase B and the preservative.
6. Homogenize.
7. Cool to 35-40C with sweep mixer and add the fragrance.

SOURCE: Goldschmidt Chemical Corp.: Suggested Formulations

**W/O Hand and Body Cream-A**

<b><u>Ingredients:</u></b>	<b><u>%w/w</u></b>
Phase A:	
Polyglyceryl-4 Isostearate (Isolan GI-34)	5.0
Hydrogenated Castor Oil	1.5
Beeswax	1.5
Triolein	12.0
Caprylic/Capric Triglycerides (Tegosoft CT)	12.0
Phase B:	
Water	65.5
Sodium Chloride	0.5
Urea	2.0
Phase C:	
Preservatives	Q.S.
Fragrance	Q.S.

**W/O Hand and Body Cream-B**

<b><u>Ingredients:</u></b>	<b><u>%w/w</u></b>
Polyglyceryl-4 Isostearate (Isolan GI-34)	5.0
Hydrogenated Castor Oil	1.5
Beeswax	1.5
Decyl Oleate (Tegosoft DO)	12.0
Cetearyl Octanoate (Tegosoft Liquid)	12.0
Phase B:	
Water	67.5
Sodium Chloride	0.5
Phase C:	
Preservatives	Q.S.
Fragrance	Q.S.

**Procedure:**

1. Heat the ingredients of Phase A to 70C. Mix until the waxes are completely dispersed.
2. In a separate vessel, combine the water and Sodium Chloride. Mix and heat to 70C.
3. Add the Sodium Chloride/Water to Phase A slowly with lightning agitation. Mix until uniform.
4. Cool to 50C with mixing.
5. Add remaining ingredients of Phase B and the preservative.
6. Homogenize.
7. Cool to 35-40C with sweep mixer and add the fragrance.

**SOURCE:** Goldschmidt Chemical Corp.: Suggested Formulations

W/O Massage Cream-Hot Process

<u>Ingredients:</u>	<u>%</u>
Oil Phase:	
Polyglyceryl-4 Isostearate (and) Cetyl Dimethicone Copolyol (and) Hexyl Laurate (Abil WE-09)	5.00
Castor Wax	0.50
F/T 200 Wax	0.50
Mineral Oil	8.00
Avocado Oil	1.00
Cetyl Dimethicone (Abil Wax 9801)	1.00
Isopropyl Myristate (Tegosoft M)	4.00
Water Phase:	
Water	78.70
Sodium Chloride	0.80
Seaweed Extract	0.50
Color, Perfume	Q.S.
Preservatives	Q.S.

W/O Massage Cream-Cold Process

<u>Ingredients:</u>	<u>%</u>
Oil Phase:	
Polyglyceryl-4 Isostearate (and) Cetyl Dimethicone Copolyol (and) Hexyl Laurate (Abil WE-09)	5.00
Mineral Oil	8.00
Avocado Oil	1.00
Cetyl Dimethicone (Abil Wax 9801)	1.00
Isopropyl Myristate (Tegosoft M)	4.00
Silica	0.50
Water Phase:	
Water	79.20
Sodium Chloride	0.80
Seaweed Extract	0.50
Color, Perfume	Q.S.
Preservatives	Q.S.

Procedure:

1. Add the components of Phase A. Heat while mixing to 80C to incorporate the waxes. Cool to 50C.
2. Heat Phase B to 50C. Add B to A slowly with a low energy mixer. Maintain a smooth milky appearance at all times.
3. Cool to 35C with sweep mixer. Add fragrance.
4. Homogenize.

SOURCE: Goldschmidt Chemical Corp.; Suggested Formulations

**Water/Oil Moisturizing Night Cream with a High Oil Content**

This relatively high oil content moisturizing night cream is a w/o emulsion offering superior lubricating and moisturizing attributes. Forlan L serves as an auxiliary water/oil emulsifier to assist in emulsion stabilization. Forlan L also contributes to the lubricating and moisturizing qualities usually associated with lanolin. This product should be especially beneficial to individuals with excessively dry skin.

**Ingredients:**

	% W/W
1. Beeswax	3.00
2. Forlan L	20.00
3. Sorbitan Sesquioleate	2.50
4. Rita SA	0.34
5. Propylparaben	0.10
6. Petrolatum	26.85
7. Distilled Water	+47.01
8. Methylparaben	0.10
9. Fragrance	QS
10. Quaternium-15	0.10

**Compounding Procedure:**

Weigh and add items 1 through 6 into a container and begin heating and stirring. While stirring continuously, heat the blend to 70-73°C. Weigh and add items 7 and 8 into another container and begin heating and stirring. Heat this blend to 70-73°C. When both blends are at 70-73°C, add items 1 through 6 to the premix of items 7 and 8. Stir continuously. Mix until uniform. Cool with mixing to 35-40°C and add items 9 and 10. Cool to 25-30°C and package fill into suitable containers.

**Note:** 1 to 2% of Patlac IL (Isostearyl lactate) may be added to improve rub out.

Formulation HB-89-L-29

**Night Creme**

This oil-in-water night creme uses Pationics as its primary emulsifiers. They are also substantive humectants. The product is smooth and creamy because of the addition of Ritawax, Ritachol and Ritachol 1000 as emollients.

**Ingredients:**

	% W/W
1. Mineral Oil	8.00
2. Ritachol	4.00
3. Ritachol 1000	8.00
4. Pationic SSL	6.00
5. Glycol Stearate	5.00
6. Pationic ISL	2.00
7. Ritawax	1.00
8. Distilled Water	61.00
9. Propylene Glycol	5.00
10. Color, Fragrance and Preservative	QS

**Compounding Procedure:**

Combine items 1-7 and heat to 70°C. Combine items 8 and 9 and heat to 70°C. Combine both ingredient phases with mixing. Cool with mixing to 45°C. Add remaining ingredients. Cool to 35°C.

Formulation HB-89-R-34

**SOURCE:** R.I.T.A. Corp.: **Suggested Formulations**



# **Section VI**

## **Hair Care Products**

**Alcohol-Free Pump Hairspray**  
**"Long Lasting Hold-Soft Natural Feel"**

	<u>% Weight</u>
Vinylcaprolactam/PVP/Dimethylaminoethylmethacrylate Copolymer (Polymer ACP-1018)	5.00
Water	94.70
Suttocide A, 50% Solution	0.30
Fragrance, Plasticizer	Q.S.

**Procedure:**

Add Polymer ACP-1018 to water. Add rest of ingredients and adjust pH to 7.0-8.0 with citric acid.

**Alcohol-Free Pump Hairspray**  
**"Stiff Hard-Hold Spray"**

	<u>% Weight</u>
Vinylcaprolactam/PVP/Dimethylaminoethylmethacrylate Copolymer (Polymer ACP-1018)	2.50
PVP/VA Copolymer (PVP/VA E735)	5.00
Water	92.20
Suttocide A, 50% Solution	0.30
Fragrance, Plasticizer	Q.S.

**Procedure:**

Add Polymer ACP-1018 and PVP/VA W-735 to water. Add Suttocide A, fragrance and plasticizer. Adjust pH to 7.0-8.0 with citric acid.

**Hair Moisturizing Spray**

	<u>% Weight</u>
Water	94.50
Acetamide MEA (and) Lactamide MEA (Incromectant LAMEA)	3.00
Cocodimonium Silk Amino Acids (Crosilkquat)	1.00
Minkamidopropalkonium Chloride (Incroquat Mink-85)	0.50
Germaben II	1.00

**Procedure:**

Warm water to 45C. Add the ingredients, mixing after each addition until clear.

**SOURCE:** Sutton Laboratories, Inc.: Suggested Formulations

Alkalizing of Hair

## a) Alkalizing agent in the form of a solution

Ammonia solution (25%)	1.00g
Water, completely desalted	99.00g

## b) Alkalizing agent in the form of a gel

Carboxylic vinyl polymer	0.7g
Water, completely desalted	97.6g
Ammonia solution (25%)	1.7g

## c) Alkalizing agent in the form of an emulsion

Oleylcetylalcohol, oxyethylated with 7 to 8 moles of ethylene oxide	5.0g
Paraffinum liquidum	15.0g
Water, completely desalted	78.5g
Monoethanolamine	1.5g

## d) Alkalizing agent in the form of an emulsion

Cetylstearylalcohol	5.0g
Cetyltrimethylammoniumchloride (50% aqueous-alcohol solution)	2.0g
Water, completely desalted	91.5g
Trisodium phosphate	1.5g

All percentages used in this application are intended to refer to percentages by weight.

SOURCE: Amerchol Corp.: Product Patent: Hair Setting Lotion  
Containing a Chitosan Derivative

Clear Conditioner

This uncommon, oil-free clear conditioner is especially designed for hair that needs good conditioning and extra body. Lexquat AMG-WC furnished excellent wet and dry combability and adds softness to the hair without the typical heavy film associated with many conditioners. Although Lexquat AMG-WC is highly substantive it will not build up through repeated applications. This product leaves even limp, fine hair manageable, clean and lively.

Part A:	% (w/w)
Deionized water	80.65
Methocel E4M (Hydroxypropylmethylcellulose)	0.75
Part B:	
Myristamine Oxide	10.00
Lexquat AMG-WC (Cocamidopropyl Dihydroxypropyl Dimonium Chloride)	5.00
Propylene Glycol USP	3.00
Lexgard M (Methylparaben)	0.30
Lexgard P (Propylparaben)	0.10
Fragrance	0.20
Citric Acid	qs to pH

Procedure:

Charge batch vessel with water and begin mixing and heating to 75C. Dust in Methocel. When completely hydrated, cool to 35C and add part B to batch. Cool to room temperature.

Adjusted pH (direct): 4.5-0.2

Formulation CD-100

Clear Conditioner

This clear conditioner is formulated for hair that requires good conditioning. It makes the hair fluffy, gives softness and shine, and hides damaged, split ends.

Part A:	% (w/w)
Deionized Water	79.20
Methocel E4M (Hydroxypropylmethylcellulose)	0.80
Part B:	
Myristamine Oxide	10.00
Lexquat AMG-BEO (Behenamidopropyl Dihydroxypropyl Dimonium Chloride)	4.50
Propylene Glycol USP	5.00
Lexgard M (Methylparaben)	0.20
Lexgard P (Propylparaben)	0.10
Fragrance	0.20
Citric Acid	qs to pH

Procedure:

Charge the batch vessel with water and begin mixing and heating to 78C+2C. Dust Methocel slowly into water with agitation. When completely hydrated, cool to 35C and add part B to batch. Adjust pH to 4.5+-0.2 then cool to room temperature.

Observation:

Viscosity @ 25C: 4000 cps

SOURCE: Inolex Chemical Co.: Formulation CD-103

Clear Conditioner

This oil-free, clear conditioner is designed for hair that needs good conditioning and extra body. It leaves even limp, fine hair manageable, clean and lively.

Part A:	(w/w)
Deionized water	79.80
Methocel E4M (Hydroxypropylmethylcellulose)	0.70
Part B:	
Myristamine Oxide	10.00
Lexquat AMG-IS (Isostearylamidopropyl Dihydroxypropyl Dimonium Chloride)	4.00
Propylene Glycol USP	5.00
Lexgard M (Methylparaben)	0.20
Lexgard P (Propylparaben)	0.10
Fragrance	0.20
Citric Acid (pH=7.0+-0.2)	0.20

Procedure:

Charge batch vessel with water and begin mixing and heating to 78+-2C. Dust Methocel slowly into water with agitation. When completely hydrated, cool to 35C. Add part B to batch. Adjust pH. Cool to room temperature.

Observations:

pH (direct): 7.0(7.2-6.8)

Viscosity @ 25C: 1550 cps

Formulation CD-102

Clear Conditioner

This clear conditioner is formulated for hair that requires good conditioning. It makes the hair fluffy, gives softness and shine, and hides damaged, split ends.

Part A:	(w/w)
Deionized water	79.20
Methocel E4M (Hydroxypropylmethylcellulose)	0.80
Part B:	
Myristamine Oxide	10.00
Lexquat AMG-BEO (Behenamidopropyl Dihydroxypropyl Dimonium Chloride)	4.50
Propylene Glycol USP	5.00
Lexgard M (Methylparaben)	0.20
Lexgard P (Propylparaben)	0.10
Fragrance	0.20
Citric Acid	qs to pH

Procedure:

Charge batch vessel with water and begin mixing and heating to 78+-2C. Dust Methocel slowly into water with agitation. When completely hydrated, cool to 35C and add part B to batch. Adjust pH to 4.5+-0.2 then cool to room temperature.

Viscosity @ 25C: 4000 cps

SOURCE: Inolex Chemical Co.: Formulation CD-103

**Clear Conditioner**

A viscous, clear conditioner which repairs, reduces static, moisturizes and adds luster.

<b><u>Ingredients:</u></b>	<b><u>% W/W</u></b>
Part A:	
1. Propylene Glycol	5.00
2. HEC QP 5200	0.80
3. Methylparaben	0.10
Part B:	
4. Distilled Water	51.15
5. EDTA	0.10
Part C:	
6. Ammonyx KP	6.00
7. Ammonyx LO	1.00
8. Laneto 50	0.75
9. dl-Panthenol	1.00
10. Simchin WS	0.75
11. Distilled Water	32.15
12. Glydant 40-700	0.20
Part D:	
13. Ritabate 20	0.80
14. Perfume	0.20
Part E:	
15. Patlac LA (44%)	QS

NOTE: 1-2% Pationic ISL may be used in Part A, but effect on viscosity has to be determined.

**Compounding Procedures:**

Part A: Dissolve Methylparaben in Propylene Glycol. Sprinkle in HEC and mix without aeration until uniformly dispersed. Part B: Dissolve EDTA in water. Add HEC slurry to EDTA mixture. Part C: Premix, mixing between additions, until uniform. Add Part C to main mixer. Mix until uniform. Avoid aeration. Part D: Add slowly with agitation to main mixing tank. Adjust pH with Patlac LA (44%) to 4.5-5.0.

Viscosity: 1800-2000 cps      pH: 4.5-5.0

SOURCE: R.I.T.A. Corp.: Formulation 105-125/HB-89-L-14

Clear Conditioner

<u>Ingredient:</u>		<u>Wt. %</u>
Deionized Water		89.1
Hydroxyethyl Cellulose	Natrosol 250 HR	0.8
Triethanolamine		0.1
Stearamine Oxide	Mazox SDA	1.2
Soya Ethyldimonium Ethosulfate	M-Quat 1033	2.5
Olealkonium Chloride	M-Quat JO-50	1.0
Propylene Glycol		5.0
Benzoic Acid		0.2
Fragrance		0.2
Citric Acid		Q.S.

pH: 4.5-5.0

Viscosity: 5000 cps

Appearance: Water-white, slightly hazy liquid

Procedure:

Disperse the hydroxyethyl cellulose in the water, and add the triethanolamine with good mixing to expedite hydration. Pre-mix the Mazox SDA, M-Quat 1033, M-Quat JO-50, propylene glycol, and benzoic acid; add to batch. Add the fragrance and adjust the pH.

Formulation B-101

Cream Rinse Conditioner

<u>Ingredient:</u>		<u>Wt. %</u>
Deionized Water		89.75
Hydroxyethyl Cellulose	Natrosol 250 HR	0.50
Triethanolamine		0.10
Benzoic Acid		0.20
Ethylene Glycol Monostearate	Mapeg EGMS	2.50
PEG-150	Maco1 E-8000	0.25
Stearamine Oxide	Mazox SDA	3.00
Hydroxypropyl Bis Stearyl- dimonium Chloride	M-Quat Dimer 18	1.50
Cetearyl Alcohol (and)		
Ceteareth 20	Maco1 124	2.00
Fragrance		0.20

pH: 5.0-5.5

Viscosity: 11,600 cps

Appearance: Opaque white lotion

Procedure:

Disperse the hydroxyethyl cellulose in water; add triethanolamine to expedite hydration. Heat to 65C (150F); add the remaining ingredients in the order shown. Cool the batch to 45C (110F) before adding fragrance.

Formulation B-102

SOURCE: Mazer Chemicals; Suggested Formulations

Clear Conditioner

This uncommon, oil-free clear conditioner is especially designed for hair that needs good conditioning and extra body. Lexquat AMG-WC furnishes excellent wet and dry combability and adds softness to the hair without the typical heavy film associated with many conditioners. Although Lexquat AMG-WC is highly substantive it will not build up through repeat applications. This product leaves even limp, fine hair manageable, clean and lively.

Part A:	<u>%(w/w)</u>
Deionized Water	80.65
Methocel E4M	0.75
Part B:	
Myristamine Oxide	10.00
Lexquat AMG-WC	5.00
Propylene Glycol USP	3.00
Lexgard M	0.30
Lexgard P	0.10
Fragrance	0.20
Citric Acid	qs to pH

Procedure:

Charge batch vessel with water and begin mixing and heating to 75C. Dust in Methocel. When completely hydrated, cool to 35C and add part B to batch. Cool to room temperature.  
adjusted pH (direct): 4.5+-0.2

SOURCE: Inolex Chemical Co.: Formulation CD-100

Foaming Anti-Dandruff Hair Conditioner

<u>Ingredients:</u>	<u>% by weight</u>
Cetyltrimethylammonium bromide	10.00
Hydroxyethyl cellulose	1.00
Sodium hydroxide	0.15
Polymer JR 30M	0.50
Bronopol	0.01
Zinc pyridinethione	0.35
Perfume and color	q.s.
Water	q.s. to 100

SOURCE: Angus Chemical Co.: Formulation PF-0112 from Cosmetics and Toiletries, Vol. 100, April 1985



Clear Conditioning Rinse

Clear, conditioning hair rinse which can be used after shampooing. Kytamer PC is a substantive humectant which helps retain moisture in hair leaving it soft and full in appearance. Kytamer PC's film forming properties give the hair shine.

**Formula:**

Kytamer PC (Chitosan PCA)	1.00%
Olealkonium Chloride (55% Aqueous)	3.64
Water	95.36
Perfume and Preservative	q.s.

**Procedure:**

Disperse Kytamer PC in water with high speed agitation. When completely dispersed, heat to 75C with continued mixing until solution is clear and uniform. Add Olealkonium Chloride and mix until uniform. Dissolve preservative into batch. Cool to room temperature.

Formulation No. T54-272-1

Conditioning Mousse for Hair

Glucquat 125 conditions the hair by maintaining moisture and reducing the drying effects of the alcohol. The mousse is formed by the combination of the non-ionic emulsifier, Ameroxol OE-20, with Glucquat 125.

**Formula:**

Glucquat 125 (Lauryl Methyl Gluceth-10 Hydroxypropyl Dimonium Chloride)	1.00%
Ameroxol OE-20 (Oleth-20)	1.00
SD Alcohol 40	15.00
Deionized water	83.00
Perfume and preservative	q.s.

**Procedure:**

Heat deionized water to 60C and add Glucquat 125, Ameroxol OE-20 and preservative into it. Cool to 40C. Add SD Alcohol 40 to water phase and mix until uniform.

**Aerosol Fill Procedure:**

Fill into aluminum mousse cans and charge with A-46 hydrocarbon propellant using 95% product and 5% propellant.

Formulation T62-88-6

SOURCE: Amerchol Corp.: Suggested Formulations

**Clear Gel Activator/Conditioner**

This is a clear rinsing curl activator used to bring out the natural curl of the hair. It also contains humectants, detackifiers and conditioners.

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Water	57.65
Carbomer 940	0.50
Triethanolamine	2.25
Phase B:	
Glycerine	32.20
Propylene Glycol	5.00
Dimethicone Copolyol (Abil B 88183)	1.00
Dimethicone Copolyol (Abil B 8851)	1.00
Quaternium-80 (Abil Quat 3272)	0.40
Phase C:	
Color, Fragrance, Preservative	Q.S.

**Procedure:**

Disperse the Carbomer into the water and mix until completely clear. Add the Triethanolamine and mix well. Mix Phase B and add slowly to Phase A while mixing. Add Phase C with mixing.

**Gel Activator**

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Water	57.65
Carbomer 940 (Acrylic Polymer)	0.50
Triethanolamine	2.25
Phase B:	
Glycerine	32.20
Propylene Glycol	5.00
Quaternium-80 (Abil Quat 3272)	1.00
PEG-20 Glyceryl Laurate (Tagat L-2)	1.40
Phase C:	
Color, Fragrance, Preservative	Q.S.

**Procedure:**

1. Disperse the Carbomer into the water with high shear lightening agitation.
2. Mix the material of Phase B, separately until dispersed. Slowly add Phase B to Phase A with agitation.
3. Add Phase C to the final product.

**SOURCE:** Goldschmidt Chemical Corp.: Suggested Formulations

Clear Hair Reparative and Conditioner

A clear liquid conditioner in which the Pationic ISL repairs and conditions and the polypeptide salt adds body and ease of combing with reduced fly-away. May be used as a "leave-in" or "rinse-out" product.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Quaternary Ammonium Polypeptide Salt	25.00
2. Ritoleth 20	3.00
3. Pationic ISL	2.00
Part B:	
4. Distilled Water	+ -69.80
Part C:	
5. Glydant 40-700	0.20
6. Perfume	QS

Compounding Procedure:

Combine ingredients of Part A and heat to 45C. Add Part B mix while cooling to room temperature, add Part C. Adjust pH to 6.5-6.9.

Viscosity: 100 cps

Formulation H-89-P-8

Hot Oil Treatment

A clear, penetrating hot oil treatment to moisturize, impart luster and ameliorate damaged hair.

<u>Ingredients:</u>	<u>% W/W</u>
1. Mineral Oil 65/70	88.35
2. Pationic ISL	5.00
3. Lauryl Myristyl Alcohol	2.00
4. 2-Phenoxyethanol	2.00
5. Shebu Refined	0.50
6. Lanolin, Extra Deodorized	2.00
7. Perfume	+ -0.15

Compounding Procedure:

Combine items 1-6. Heat to 165F, and cool to 100F. Add perfume. Mix until uniform.

Formulation HB-89-L-18/Ref.103-10

OSOURCE: R.I.T.A. Corp.: Suggested Formulations

Clear Oil-Free Hair Conditioner Gel

This is a cold process recipe featuring mild substantive conditioners and hair shaft moisturizers. The benefit of being free of waxes and fatty oils is in the results. This light, yet lubricious gel massages in the actives to leave the hair with shine and body, naturally! Since there's no oily residue, you can even use it as a "leave-on" for extra conditioning and body.

<u>Ingredient:</u>	<u>Percent by Weight</u>
Incroquat BA-85 babassamidopropyl dimethyl benzyl ammonium chloride	1.50
Croquat M cocodimonium hydrolyzed protein	3.00
Incromectant LAMEA acetamide MEA and lactamide MEA	2.50
Glycerin (moisturizer)	2.00
Dowicil 200 (preservative)	0.10
Methocel 40-202 (hydroxypropyl methylcellulose, thickener)	2.00
Versene 100 (tetrasodium EDTA)	0.10
Dimethicone Copolyol	2.00
Citric acid (for pH balance)	0.20
Deionized water (<35C)	86.60

**Procedure:**

1. Disperse and dissolve the first five ingredients into the water followed by addition of Methocel 40-202, a high clarity grade of surface treated hydroxypropyl methylcellulose.
  2. After it has dispersed and wetted out, the Methocel 40-202 can be solubilized by addition of a small amount of 20% NaOH (a few drops for 200 g of this formula). Maintain constant agitation as the alkali promotes polymer thickening.
  3. At this point, the Versene 100 chelant (for clarity) can be added followed by addition of the dimethicone copolyol.
  4. The formulation is then acid balanced to a pH of 4-5 by use of citric acid.
  5. A fragrance of your choice may be added for heightened appeal.
- SOURCE: Dow Chemical Co.: Suggested Formulation**

Clear Dilutable Gel

	<u>% (w/w)</u>
Lexquat AMG-O (Oleamidopropyl Dihydroxy Dimonium Chloride)	50.00
Lexeine QX-3000 (Quaternium-76 Hydrolyzed Animal Protein)	25.00
Stearalkonium Chloride	25.00

**Procedure:**

Combine Lexquat and Lexeine. Heat to 75C with mixing and add stearalkonium chloride. Mix until clear. Cool, adjust pH to 4.0-4.5. A clear gel forms on cooling.  
adjusted pH (direct): 4.0-4.5

**SOURCE: Inolex Chemical Co.: Formulation CD-101**

Conditioner Hair Cream

	<u>% Wt.</u>
Lexate CRC	5.50
Stearyl Stearate	1.00
Lexein X250	5.00
Mineral Oil 125/135	2.00
PEG 400 Distearate	1.50
Citric Acid Monohydrate	0.50
Sodium Chloride	1.20
Perfume G73-146	0.25
Water	82.95

Consistency: after 24 hours @ 25C: Soft Cream

pH: 5.5

Charge Water into making tank and heat to 70-75C. Dissolve Citric Acid and Sodium Chloride, then add and disperse Lexate CRC, Stearyl Stearate, Mineral Oil and PEG 400 Distearate. Continue stirring and cool to 50-55C, and add and disperse Lexein and Perfume. Continue cooling with gentle agitation to 35-40C. Fill into suitable containers. Consistency develops fully after 24 hours at 25C.

Formula 4316A

Conditioner Hair Lotion

	<u>% Wt.</u>
Lexate CRC	5.50
Stearyl Stearate	1.00
Lexol IPP	1.00
Hexylene Glycol	5.00
Citric Acid Monohydrate	0.50
Sodium Chloride	1.00
Perfume M-45790	0.25
Water	85.65
D&C Green #5	Q.S.
D&C Yellow #10	Q.S.

Viscosity: 3090 cps

pH: 5.9

Charge Water and Hexylene Glycol into making tank and heat to 70-75C. Dissolve Citric Acid and disperse Lexate CRC, Stearyl Stearate and Lexol with moderate agitation to avoid incorporating air. Cool to 45-50C and add Sodium Chloride with good agitation. Continue stirring, cool to 40-45C and add Perfume and Colors. Cool further with gentle agitation to 25-30C. Pack into suitable containers and let stand. Viscosity develops fully after 24 hours at 25C.

Formula 4320E

SOURCE: Inolex Chemical Co.: Suggested Formulas

Conditioner Rinse

<u>Ingredients:</u>	<u>% by Weight</u>
Deionized water	90.80
Neobee M-5	3.25
Kessco Cetyl Alcohol	2.10
Stearyl alcohol	1.25
Ammonyx KP	1.00
Hydroxyethylcellulose	0.45
Wecobee M	0.35
Propyl paraben	0.30
DMDM hydantoin	0.25
Fragrance	Q.S.

Mixing Procedure:

Add deionized water to a suitable mixing vessel and begin heating. Start mixing water and slowly disperse the hydroxyethylcellulose (avoid clumping). Add remaining ingredients to the water making sure to allow good agitation after each addition. Maintain heat at 65C for ten to fifteen minutes making sure temperature does not exceed 67C. Slow agitation to moderate speed and cool until temperature reaches 35C.

Physical Properties:

Opaque, cream  
 Viscosity @ 25C: 1750-3000 cps  
 pH (as is): 4-5

SOURCE: Stepan Co.: Formulation No. 594

Hair Conditioning Rinse

<u>Phase A:</u>	<u>% by Weight</u>
Water	90.50
Hydroxypropyl Methylcellulose (Methocel F4M)	1.50
Phase B:	
PPG-5-Ceteth-10 Phosphate (Crodafos SG)	1.00
Acetamide MEA (and) Lactamide MEA (Incromectant LAMEA)	3.00
Babassamidopropalkonium Chloride (Incroquat BA-85)	1.00
Phase C:	
Cocodimonium Silk Amino Acids (Crosilkquat)	2.00
Germaben II	1.00

Procedure:

Heat 1/3 of the water to 85C. Disperse Methocel F4M in the hot water. Add the remaining cold water. Mix until hydrated. Add ingredients from Phase B, mixing after each addition until clear. Cool batch to 40C and add Phase C. Mix until clear.

SOURCE: Sutton Laboratories: Suggested Formulation

Conditioner That Shampoos

Part:	Ingredient:		Wt %
A	Deionized Water		32.8
	Cocamidopropyl Hydroxysultaine	Mafo CSB-50	20.0
	Lauramine Oxide	Mazox LDA	24.0
	Cocamide DEA	Mazamide JT-128	2.0
	Benzoic Acid		0.2
	Na <sub>4</sub> EDTA		0.1
B	Deionized Water		10.0
	Soya Ethyldimonium Ethosulfate	M-Quat 1033	0.4
	Isostearamidopropyl Ethyldimonium Ethosulfate	M-Quat 522	0.2
C	Fragrance		0.3
	Citric Acid		Q.S.

pH: 5.5-6.0

Viscosity: 2,100 cps

Appearance: Clear, straw-colored liquid

Procedure:

Blend Part A ingredients; heat to 40C (105F). Pre-mix Part B; heat to 40C (105F). Combine Parts A and B; add fragrance and adjust pH.

SOURCE: PPG Industries, Inc.: Formulation B-105

Creme Rinse Protein Conditioner

	% Wt.
Lexate CRC	5.50
Stearyl Stearate	1.00
Lexein X250	3.50
Lexgard M	0.15
Lexgard P	0.05
Bronopol	0.05
Citric Acid Monohydrate	0.50
Sodium Chloride	1.00
Perfume 802169U	0.25
Water	88.00
FD&C Yellow #5	Q.S.

Viscosity: 1700 cps      pH: 5.6

Charge Water into making tank and heat to 70-75C. Dissolve Lexgards and Citric Acid and disperse Lexate CRC and Stearyl Stearate with moderate agitation to avoid incorporating air. Cool to 45C and add Bronopol, Perfume, Lexein, Sodium Chloride and Color with good agitation. Continue stirring and cool to 25-30C. Pack into suitable containers and let stand. Viscosity develops fully after 24 hours at 25C.

SOURCE: Inolex Chemical Co.: Formula 4093A

**Conditioning Hair Pomade**

A quality hair pomade which conditions and moisturizes and has better spreading properties because of Pationic SSL. It has increased luster because of natural gloss agents, Simchin and Shebu.

<u>Ingredients:</u>	<u>% W/W</u>
1. Ritawax	1.50
2. Shebu	2.00
3. Simchin	2.00
4. Pationic SSL	2.00
5. Grilloten LSE 87K	1.00
6. Mineral Oil	13.00
7. Petrolatum	78.50
8. Color, Fragrance and Preservatives	QS

**Compounding Procedure:**

Blend items 1 through 7 and heat until clear. Cool with stirring to 55C and add color, perfume and preservative. Fill at 50C. Stir while filling.

SOURCE: R.I.T.A. Corp.: Formulation H-89-S-7

**Finishing Lotion**

A translucent gel hair dressing which provides gloss, moisturization, and conditioning without greasiness.

<u>Part:</u>	<u>Ingredient:</u>		<u>Wt. %</u>
A	Cetyl Alcohol	CO-1695	1.0
	Propylene Glycol		32.0
	PPG-10 Butanediol	Macol 57	8.0
	Tetrabutoxypropyl Methicone	Masil 756	1.0
	Hydroxypropyl Bis-Stearyltrimonium Chloride	M-Quat Dimer 18PG	1.0
	Dimethicone Copolyol	Masil 280	0.5
B	Deionized Water		54.2
	Glycerin	Supero1	2.0
	Quaternium 15	Dowicil 200	0.2
C	Citric Acid, 10%		0.1
	Fragrance		Q.S.

pH: 6.0-6.5

Viscosity: 125,000-135,000 cps (Brookfield TC @ 0.6 rpm)  
20,000- 23,000 cps (Brookfield #3 @ 3 rpm)

Appearance: Translucent soft gel

**Procedure:**

Blend and heat part A ingredients to 65C. In a separate vessel, blend and heat the part B ingredients to 65C. Add part B to part A with good propeller mixing. Continue mixing while cooling the batch to 40C. Adjust pH and add fragrance.

SOURCE: PPG Industries, Inc.: Formulation D-106



Conditioning Hair Setting Gel

The use of Dimethicone Copolyol in this hair setting gel improves the gloss, combability and conditioning properties of this formula.

<u>Ingredients:</u>	<u>% w/w</u>
Water	84.95
Tetrasodium EDTA	0.10
Dimethicone Copolyol (Abil B 8851)	0.35
Dimethicone Copolyol (Abil B 88183)	0.45
Carbomer 940	1.10
Sodium Hydroxide, 20% solution	1.55
Vinylcaprolactam/PVP/Dimethylaminoethyl-methacrylate Copolymer	10.00
Oleth-20	1.00
Preservative, Color, Fragrance	0.50

Procedure:

Add the Tetrasodium EDTA and Dimethicone Copolyols to the water. Mix until fully dispersed. Create a vortex in the water and sift in the Carbomer. Mix until the Carbomer is completely dissolved. Add the Sodium Hydroxide, Vinylcaprolactam/PVP/dimethylaminoethyl-methacrylate Copolymer. Warm the Oleth-20 and add as a liquid. (Cool slightly before adding.) Add color, fragrance and preservative.

Hot Oil Treatment

<u>Ingredients:</u>	<u>% w/w</u>
Almond Oil	15.0
Rose Hip Oil	5.0
Mineral Oil	56.7
Cetyl Dimethicone (Abil Wax 9801)	1.0
Cetyl Dimethicone (Abil Wax 9814)	0.5
Stearyl Dimethicone (Abil Wax 9800)	0.8
Dimethicone Copolyol (Abil B 8852)	0.5
Phenyl Trimethicone (Abil AV-20)	2.5
Squalene	15.0
Caprylic/Capric Triglycerides (Tegosoft CT)	5.0
Preservatives	Q.S.
Fragrance	Q.S.

Procedure:

Mix ingredients in order.

SOURCE: Goldschmidt Chemical Corp.: Suggested Formulations

**Conditioning Hair Spritz**

<u>Ingredients:</u>	<u>% w/w</u>
Water	79.0
Propylene Glycol	5.0
Ethanol (SDA-40 95%)	15.0
Quaternium-80 (Abil Quat 3272)	0.4
Dimethicone Copolyol (Abil B 8851)	0.3
Dimethicone Copolyol (Abil B 88183)	0.3
Color	Q.S.
Fragrance	Q.S.
Preservatives	Q.S.

**Procedure:**

Combine ingredients in order.

Formula aids in wet combing, provides static control and leaves a soft sheen on the hair.

For more substantivity, increase the Propylene Glycol to 7%, increase the Abil Quat 3272 to 0.6% and add 0.5% Abil B 9950 (Dimethicone Propyl PG-Betaine)

**Emollient Glossing Spritz**

<u>Ingredients:</u>	<u>% w/w</u>
Phenyl Trimethicone (Abil AV-20)	49.8
Cyclomethicone (Abil B 8839)	40.0
Dimethicone (Abil 350)	2.5
Dimethicone (Abil 5000)	7.5
Alpha Tocopherol (Vitamin E)	0.2
Natural Oils	Q.S.
Fragrance	Q.S.

**Procedure:**

Mix in order of addition until clear. Disperse into spray bottles.

Caution - Avoid using raw materials with more than 0.1% water as turbidity may result.

**SOURCE:** Goldschmidt Chemical Corp.: Suggested Formulations

Conditioning Spritz

This leave-on conditioning spritz aids in combing, quickens drying time and imparts shine and softness to hair. This conditioner also provides body and activates curls.

<u>Materials:</u>	<u>Parts/Wt. (%)</u>
Part A:	
Incropol CS-20 (cetereth 20)	1.0
Stearyl Alcohol	1.0
SF1202 (cyclomethicone)	3.0
Part B:	
Water	93.6
Quat-Pro S (stearyltrimonium hydrolyzed animal protein)	0.5
Part C:	
SM2115 (trimethylsilylamodimethicone)	0.8
Kathon	0.1

Procedure:

- 1) Preheat Part A and Part B to 75C.
- 2) Add Part B to Part A with agitation.
- 3) Cool with mixing to 40 to 50C.
- 4) Blend in SM2115 and then the Kathon.
- 5) Cool to room temperature. Place in pump container.

Comments:

Use less stearyl alcohol for a thinner formulation.

Formula HP103

Hair Conditioner

This formulation is particularly good on damaged hair and improves softness.

<u>Materials:</u>	<u>Parts/Wt (%)</u>
Part A:	
Varisoft CRC	5.00
Citric Acid	0.05
Dowicil 200	0.10
Water	89.85
Part B:	
SM2115-D1	5.00
Citric Acid	q.s.

Procedure:

- 1) Heat water, citric acid & Dowicil 200 to 65C. Slowly add Varisoft CRC until completely melted and emulsion forms.
- 2) Cool to 45-50C and add SM2115-D1. Adjust pH to 4.5 with citric acid.
3. Cool and package.

SOURCE: GE Silicones: Formula HP104

Cream Conditioner for Permanent-Waved Hair

<u>Ingredients:</u>	<u>% by Weight</u>
Ammonyx 4	5.00
Glycerine	1.50
Panthenol	0.50
Citric acid	Q.S.
D.I. water	Q.S. to 100
Kessco Cetyl Alcohol	2.50
PPG-Ceteth 20	1.25
Stearyl alcohol	0.75
Preservative	Q.S.
Fragrance	Q.S.
Dye	Q.S.

Mixing Procedure:

Add ingredients and mix while heating to 75C. Mix until well blended. Cool with mixing to 30C and add fragrance, preservative, and dye if desired. Adjust pH with citric acid to 3-4.

Physical Properties:

Opaque, white liquid  
 pH (as is): 3-4  
 Viscosity at 25C: 2,000 cps  
 Stable for two weeks at 50C  
 Passed three freeze thaw cycles

Formulation No. 315

Dry & Damaged Hair Conditioner

<u>Ingredients:</u>	<u>% by Weight</u>
Ammonyx 4	3.50
Sodium PCA	1.25
Propylene glycol	0.75
Amphosol CA	0.50
Lactic acid	Q.S.
Kessco Cetyl Alcohol	2.70
Stearyl alcohol	0.70
Kessco Glycerol Monostearate SE AS	0.50

Mixing Procedure:

Combine ingredients. Adjust pH with lactic acid to 3-4. Heat to 70-75C with stirring. Allow to cool to room temperature and add fragrance, dye and preservative, if desired.

Physical Properties:

White, opaque liquid  
 pH (as is): 3.0-4.0  
 Viscosity @ 25C: 3,500 cps  
 Passed three freeze/thaw cycles  
 Stable at 50C for two weeks

SOURCE: Stepan Co.: Formulation No. 314

Cream Curl Activator

An emulsion hair groom with Masil 756 to provide gloss, softness, and combability to permed, bleached or color-treated hair.

<u>Part:</u>	<u>Ingredient:</u>	<u>Wt. %</u>
A	Deionized Water	80.43
	Hydroxypropyl Methylcellulose	Methocel 40-100 0.20
	Triethanolamine	0.02
	Panthenol	DL Panthenol TK 1.00
	Hydrolyzed Silk Protein	Silk-Pro CM-1000 1.00
	Quaternium-15	Dowicil 200 0.30
B	Cetearyl Alcohol (and) Poly-	
	sorbate 60 (and) PEG-150	
	Stearate (and) Steareth-20	Macol CPS 6.00
	Laneth-16 (and) Ceteth-16	
	(and) Oleth-16 (and)	
	Steareth-16	Solulan 16 1.00
	Mineral Oil	Drakeol 9 2.00
	Tetrabutoxypropyl Methicone	Masil 756 3.00
C	Cyclomethicone	Masil SF-V 3.00
	Dimethicone Copolyol	Masil 280 2.00
	Citric Acid, 50%	0.05
	Fragrance	Q.S.

pH: 5.0-6.0

Viscosity: 160,000-200,000 cps (Brookfield TD @ 0.6 rpm)  
10,000- 12,000 cps (Brookfield #3 @ 6 rpm)

Appearance: Soft white cream

Procedure:

Disperse hydroxypropyl methylcellulose in the water, then add the triethanolamine to initiate hydration. When hydration is complete (about 20 minutes), add the remaining part A ingredients, heat to 55C and stir until uniform. In a separate vessel, blend the part B ingredients and heat to 55C. Add part B to part A with good agitation, forming the emulsion. Maintain agitation while cooling the batch to 40C, then adjust the pH and add fragrance.

SOURCE: PPG Industries, Inc.: Formulation D-105

**Cream Rinse**

	<u>% Weight</u>
Hydroxyethylcellulose (Cellosize Polymer PCG-10)	0.50
Polyquaternium-10 (Ucare Polymer JR-30M)	0.50
Glycol Distearate	0.50
Cetearyl Alcohol	2.00
Cetyl Alcohol (Cetal)	0.50
PEG-100 Stearate	1.00
Stearalkonium Chloride	1.70
Citric Acid	0.05
Water	92.25
Germaben II	1.00

**Procedure:**

Dispense Ucare Polymer JR-30M and Cellosize Polymer PCG-10 in room temperature water with agitation. Heat to 70-75C. In a separate container add glycol distearate, cetearyl alcohol, cetyl alcohol and PEG-100 stearate and heat to 70C. When premix is at 70C and mixed to uniformity, slowly add it to the polymer solution. Mix until uniform. Add stearalkonium chloride and citric acid and mix until uniform. Cool to 50C and add Germaben II. Cool to room temperature with proper mixing.

**Replenishing Cream Rinse**

	<u>% Weight</u>
Water	87.60
Hydroxyethylcellulose (Natrosol 250 HHR)	0.70
Glycol Distearate (Kessco Ethylene Glycol Distearate)	2.00
Cetearyl Alcohol (Lanette O)	2.50
Bishydroxyethyl Dihydroxypropyl Stearaminium Chloride (Monoquat TG)	6.70
Linoleamidopropyl PG-Dimonium Chloride Phosphate (Phospholipid EFA)	0.30
Germaben II	0.20

**Procedure:**

Charge water; carefully add Natrosol 250 HHR with good agitation. Heat to 50-60C. Add next 4 ingredients and continue heating to 70C. Cool to 45C and adjust pH to 4.5 to 5.0. Add Germaben II. Continue cooling and agitation until pearl develops.

**SOURCE:** Sutton Laboratories, Inc.: Suggested Formulations

Creme Rinse Economy-Pearlescent

	% Wt.
Lexate CRC	3.40
PEG 6000 Distearate	1.00
Lexgard M	0.15
Lexgard P	0.05
Sodium Chloride	0.60
Citric Acid Monohydrate	0.35
Perfume #2478	0.10
Water	94.35
D&C Red #19	Q.S.

Viscosity, Brookfield RVT: 1400 cps

pH: 5.4

Charge Water and heat to 70-75C. Add all ingredients except Color, Sodium Chloride and Perfume. Agitate until uniformly dispersed. Cool with agitation to 50C and add Sodium Chloride. Cool with agitation to 45C and add balance of ingredients. Cool to 30C and fill.

Formula 4433-A

Creme Rinse Economy-Opaque

	% Wt.
Lexate CRC	3.40
PEG 600 Distearate	0.30
Lexgard M	0.15
Lexgard P	0.05
Sodium Chloride	0.60
Citric Acid Monohydrate	0.35
Perfume #2478	0.10
Water	95.05
D&C Red #19	Q.S.

Viscosity: Brookfield RVT: 1750 cps

pH: 5.3

Charge Water and heat to 70-75C. Add all ingredients except Color, Sodium Chloride and Perfume. Agitate until uniformly dispersed. Cool with agitation to 50C and add Sodium Chloride. Cool with agitation to 45C and add balance of ingredients. Cool to 30C and fill.

Formula 4432B

SOURCE: Inolex Chemical Co.: Suggested Formulas

**Curl Activator Gel**

This gel activator contains conditioners and humectants to leave the hair healthy, maintain curl and add shine.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Acritamer 940	1.00
2. Distilled Water	45.00
Part B:	
3. Distilled Water	37.10
4. Glycerin	10.00
5. Oleyl Dimethyl Benzyl Ammonium Chloride	1.00
6. Shebu Natural	0.50
7. Simchin Natural	0.50
8. Pationic SSL	3.00
9. Grilloten LSE 87K	1.00
Part C:	
10. Color, Fragrance and Preservatives	QS
Part D:	
11. Triethanolamine (50%)	0.90

**Compounding Procedure:**

Slowly add Acritamer 940 to rapidly stirring water of Part A. Mix until uniform. Combine Part B and heat to 140F. Mix and add to Part A with mixing. When uniform, add Part C. Then neutralize with Part D.

Formulation 104-147

**Penetrating Gel Base for Hair Products**

A hair gel designed to penetrate the hair to transport oils and humectants.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Propylene Glycol	5.00
2. Ritoleth 10	3.00
3. 2-Phenoxyethanol	2.00
4. Methylparaben	0.10
5. Propylparaben	0.05
Part B:	
6. Distilled Water	87.35
7. dl-Panthenol	0.50
Part C:	
8. Acritamer 940	1.00
Part D:	
9. Triethanolamine (50%)	1.00

**Compounding Procedure:**

Add 2-Phenoxyethanol to Propylene Glycol, mix. Add Ritoleth 10, mix. Add Parabens, mix. Combine Part B. Slowly add Part A to Part B, mix. Add Part C, mix until fully dissolved. Neutralize with Part D.

Formulation 103-148

SOURCE: R.I.T.A. Corp.: Suggested Formulations



Deep Hair Conditioner with Cholesterol

This formulation contains Cholesterol for its superior hair conditioning attributes. In addition, the formulation also contains Ritachol 1000 as a primary emulsifying agent. The formulation is a smooth, creamy-textured oil/water emulsion cream which applies easily and "rubs-in" quickly, leaving the hair and scalp soft and smooth to the touch. Supersat AWS-4 has been incorporated as an auxiliary emulsifier, which supplements the cholesterol related conditioning effect. The product should be liberally applied, allowed to remain about 30 minutes and then rinsed from the hair. Heat delivered by means of a hair drier is advised, to enhance the conditioning effect.

Ingredients:

	% W/W
1. Ritachol	2.00
2. Quaternium 18	2.00
3. Cholesterol N.F.	1.00
4. Ritachol 1000	10.00
5. Petrolatum	5.00
6. Supersat AWS-4	2.00
7. Sorbic Acid	0.20
8. Propylparaben	0.10
9. Methylparaben	0.20
10. BHA	0.20
11. Distilled Water	74.30
12. Propylene Glycol	3.00
13. Perfume	QS

Compounding Procedure:

Weigh and add items 1-5, 8 and 10 into an auxiliary mixing kettle and begin heating and stirring. In the main mixing tank, add the remaining ingredients, with the exception of the perfume. Heat the water phase to 70-73C. Heat the oil phase to 75-78C. When the oil phase is at 75-78C and the water phase is at 70-73C, add the oil phase to the water phase. Begin cooling the batch; cool to 40-45C and add the perfume. Cool to 35-40C and pass through a colloid mill. Package at 30-35C.

Formulation HB-89-R-23

Sheen Type Hair Conditioner

A petrolatum based hair dressing with moisturizer.

Ingredients:

	% W/W
1. Eskar Wax R-25	10.68
2. Petrolatum USP	49.17
3. Mineral Oil (Carnation Light)	30.00
4. BHA	0.10
5. Propylparaben	0.05
6. Forlan L	5.00
7. Color (oil soluble)	QS
8. Ritachol	3.00
9. Pationic ISL	2.00
10. Perfume	QS

Weigh all ingredients, except perfume. Heat to 60-65C while stirring. Cool to 50C and add perfume. Package fluid at 42-43C. Mix while filling.

SOURCE: R.I.T.A Corp.: Formulation HB-89-R-25

**Detangling Sheen Conditioner (Pump-Spray)**

<u>Ingredients:</u>	<u>% by Weight</u>
Ammonyx KP	3.00
PPG Methyl Gluceth-20	1.25
Propylene glycol	0.75
Lanolin	0.45
Polysorbate 20	0.25
Panthenol	0.25
Fragrance	Q.S.
Imidazolidinyl urea	0.50
Diazolidinyl urea	0.50
D.I. water	Q.S. to 100

**Mixing Procedure:**

Heat deionized water in a mixing vessel to 50C. Add the first six ingredients, mixing well after each addition. Cool to 30C with mixing. Add ureas, for preservative, and fragrance, if desired.

**Physical Properties:**

Cloudy, white liquid

Viscosity @ 25C is water thin

pH (as is): 5-6

Passed three freeze thaw cycles and one week at 50C

Formulation No. 334

**Clear Hair Rinse and Conditioner**

<u>Ingredients:</u>	<u>% by Weight</u>
Hydroxypropyl methylcellulose (3.0% Aq. Solution W/W)	40.0
Ammonyx KP (50%)	4.0
Solulan 98	0.5
D.I. Water	Q.S. to 100

**Mixing Procedure:**

Add Ammonyx KP to water with agitation until homogeneous. Follow with the addition of the methylcellulose solution, per manufacturer's instructions, mixing until uniform. Add Solulan and mix until dissolved.

**Physical Properties:**

Clear liquid

pH (as is): 4.5-5.5

Viscosity @ 25C: 5090 cps

Passed three freeze/thaw cycles

Stable at 50C for two weeks

SOURCE: Stepan Co.: Formulation No. 396

Elastic Curl Activator/Conditioner

This curl activator has Ritachol 1000 and Laneto 50 for stability. Glycerin and propylene glycol are good moisturizers for curl activation. The Ritalastin EL-30 will aid in repair of hair damage, leave a more manageable hair style and will help prevent future damage.

<u>Ingredients:</u>	<u>% W/W</u>
1. Ritachol 1000	4.00
2. Glyceryl Stearate	4.50
3. Petrolatum	2.00
4. Mineral Oil	6.00
5. Hydroxyethylcellulose	0.55
6. Propylene Glycol	2.00
7. Glycerin	7.00
8. Laneto 50	1.00
9. Preservatives and Color	QS
10. Distilled Water	70.95
11. Ritalastin EL-30	2.00
12. Fragrance	QS

Compounding Procedure:

Disperse cellulose gum (item 5) in water with agitation. Heat to 70C. Add items 6-11 and heat to 70C. Heat oil phase (items 1-4) to 70C and add to hot water phase with agitation. Mix well, cool to 40C, add fragrance. Cool to 35C. Fill into proper container.

Formulation HB-89-R-22

Spray Curl Activator

A glycerin based spray curl activator with a quat quaternium compound to reduce static charge and fly away. Pationic SSL helps with moisturization and Shebu and Simchin are emollients which contribute luster.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	84.50
2. Glycerin	10.00
3. Stearyl Dimethyl Benzyl Ammonium Chloride	0.50
4. Shebu	0.50
5. Simchin	0.50
6. Pationic SSL	3.00
7. Grilloten LSE 87K	1.00
8. Color, Fragrance and Preservative	QS

Compounding Procedure:

Combine items 1 through 7 and heat to 60C. Mix until uniform. Cool with mixing to 40C. Add remaining ingredients. Cool to 35C. Package.

Formulation H-89-S-13

SOURCE: R.I.T.A. Corp.: Suggested Formulations

**Enriched Cream Conditioner**

<b><u>Ingredients:</u></b>	<b><u>% w/w</u></b>
Phase A:	
Water	89.75
Stearamidopropyl Dimethylamine (Tegamine 18)	1.50
Citric Acid Monohydrate	0.60
Methyl Paraben	0.20
Phase B:	
Glyceryl Stearate S.E. (Tegin)	3.00
Ceteth-2	1.50
Cetyl Alcohol	0.50
Phase C:	
Propylene Glycol	1.00
Quaternium-80 (Abil Quat 3270)	0.50
Dimethicone Copolyol (Abil B 8851)	0.40
Behenoxy Dimethicone (Abil Wax 2440)	0.35
Phase D:	
Propyl Paraben	0.10
Sodium Chloride (35% Sodium)	0.60
Perfume	Q.S.
Color	Q.S.

**Procedure:**

1. Add ingredients of Phase A in descending order. Mix and heat material at 70C until dispersed.
2. Melt and mix solids of Phase B separately. Disperse Phase B into A with agitation.
3. Begin ambient cooling of batch. Add pre-mixed materials of Phase C to reactor.
4. Add material of Phase D at 40C. Homogenize. Dispense at 35C.

**Pump Spray Conditioner**

A combable pump spray conditioner that provides gloss and sheen to the hair.

<b><u>Ingredients:</u></b>	<b><u>% w/w</u></b>
Stearamidopropyl Dimethylamine (Tegamine 18)	1.00
Glycerin	10.00
Propylene Glycol	10.00
Preservatives	Q.S.
Phosphoric Acid	to pH 5.0
Water	77.60
Dimethicone Copolyol (Abil B 88183)	1.00
Sodium Chloride	0.40

**Procedure:**

Heat the water to 65C. Add the Glycerin, Propylene Glycol, Dimethicone Copolyol, Sodium Chloride and preservatives. Mix until clear. Add the Stearamidopropyl Dimethylamine and adjust the pH. Cool and fill into pump spray units.

**SOURCE:** Goldschmidt Chemical Corp.: Suggested Formulations

**Glossing Hair Conditioner**

This conditioner provides exceptional hair control, wet and dry combability, and gives a soft gloss to the hair.

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Water	91.25
Citric Acid	0.50
Phase B:	
Stearamidopropyl Dimethylamine (Tegamine 18)	1.25
Glyceryl Stearate S.E. (Tegin)	3.00
Ceteth-2	1.50
Behenoxy Dimethicone (Abil Wax 2440)	0.35
Phase C :	
Propylene Glycol	0.90
Quaternium-80 (Abil Quat 3272)	0.40
Phase D:	
Dimethicone Copolyol (Abil B 8851)	0.25
Sodium Chloride-25% aqueous solution	0.60
Phase E:	
Color, Fragrance, Preservatives	Q.S.

**Procedure**

1. Heat the water to 70C. Add and disperse the Citric Acid.
2. Add the ingredients of Phase B to Phase A. One at a time, mixing between additions. After all additions are made mix until homogeneous.
3. Cool batch to 40C. Mix Phase C and add to A/B. Use sweep mixer.
4. Add remaining ingredients. Mix until uniform using sweep mixer.

**Cream Hair Conditioner**

<u>Ingredients:</u>	<u>% w/w</u>
Water	90.8
Glyceryl Stearate S.E. (Tegin)	3.0
Behenoxy Dimethicone (Abil Wax 2440)	0.3
Cetyl Alcohol	2.0
Propylene Glycol	3.0
Quaternium-80 (Abil Quat 3272)	0.5
Dimethicone Copolyol (Abil B 8851)	0.4
Color, Preservatives, Fragrance	Q.S.

**Procedure:**

1. Heat the water to 70-75C. Disperse the Tegin, Abil Wax 2440 and Cetyl Alcohol. Mix well.
2. Begin cooling. Cool to 45-50C. while mixing. Mix the Propylene Glycol and the Abil Quat 3272 together and add to the batch. Mix.
3. Switch to sweep mixer. Cool to 35-40C. Add the Abil B 8851, Color, Preservatives, and Fragrance. Mix.
4. Continue cooling. Fill.

SOURCE: Goldschmidt Chemical Corp.: Formula GCC 16-29

**Guanidine No Base Relaxer**

A cream/actuator system for no base relaxer. Contains emollients and moisturizers to prevent drying.

**I. Activator Solution**

<u>Ingredients:</u>	<u>% W/W</u>
1. Guanidine Carbonate	30.00
2. Distilled Water	70.00
3. Color, Preservative	QS

**Compounding Procedure:**

Combine ingredients at 20C or higher.

**II. No Base Cream**

<u>Ingredients:</u>	<u>% W/W</u>
1. Ritachol 2000	12.00
2. Ritaderm	4.00
3. Petrolatum	10.00
4. Mineral Oil	16.00
5. Supersat AWS 4	2.00
6. Calcium Hydroxide (dry)	7.00
7. Propylene Glycol	5.00
8. Distilled Water	44.00
9. Fragrance, Preservative	QS

**Compounding Procedure:**

Combine ingredients 1-5 and heat to 70C. Combine ingredients 6-8 and heat to 70C. Combine both phases, mix well and cool with mixing to 45C, add remaining ingredients and cool with mixing to 40C. Package I at 1.75 fl. oz. Package II at 7.50 av. oz.

**Directions:**

Mix I in II, stir well with wooden stick until color is completely dispersed. Use as per normal relaxer instructions.

Formulation HB-89-R-15

**Hair Relaxer**

Super strength sodium hydroxide based hair relaxer.

<u>Ingredients:</u>	<u>% W/W</u>
<b>Part A:</b>	
1. Ritachol 2000	15.00
2. Mineral Oil	17.00
3. Ritachol	2.00
4. Petrolatum	17.50
5. Ritahydrox	0.50
6. Propylparaben	0.13
7. Rita SA	2.00
<b>Part B:</b>	
8. Propylene Glycol	6.00
9. Distilled Water	29.67
10. Methylparaben	0.20
<b>Part C:</b>	
11. Sodium Hydroxide (25% Solution)	10.00

Weigh Part A and heat to 78 to 82C. Weigh Part B and heat to 50C; add 25% Sodium Hydroxide Solution and raise the temperature to 75C. Add Part B to Part A slowly, avoiding aeration. Cool to 25C. Mill if required.

Formulation 106-78

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Hair ConditionerIngredients:% by Weight

## Part A:

Stepanquat 6585	2.5
Kessco Cetyl Alcohol	2.0
Stearyl alcohol	2.0

## Part B:

Amphosol CA	3.2
Fragrance, dye, preservative	Q.S.
D.I. Water	Q.S. to 100

Mixing Procedure:

Combine ingredients in Part A and heat to 75-80C. Heat D.I. Water to 85C and slowly add Part (A) to it with constant mixing. Add Amphosol CA with constant mixing and cool to 35C. Add fragrance, dye and preservative if desired.

Typical Properties:

pH (as is): 5.0-5.5

White liquid

Viscosity: Flowable cream

Freeze thaw and elevated heat stable

Formulation No. 417

Hair ConditionerIngredients:% by Weight

## Part A:

Stepanquat 6585	4.0
Kessco Cetyl Alcohol	2.0
Stearyl Alcohol	2.0
Kessco Glycerol Monostearate	0.5

## Part B:

Amphosol CA	2.0
Fragrance, dye, preservative	Q.S.
D.I. Water	Q.S. to 100

Mixing Procedure:

Combine ingredients in Part A and heat to 75-80C. Heat DI water to 85C and slowly add Part (A) to it with constant mixing. Slowly add Amphosol CA and cool to 35C with constant mixing. Add fragrance, dye and preservative, if desired.

Physical Properties:

pH (as is): 3.0-3.5

Viscosity: 2,060 cps

Passed freeze thaw test

Stable for two weeks at 50C

Opaque, white liquid

SOURCE: Stepan Co.: Formulation No. 418

Hair Conditioner

<u>Part:</u>	<u>Ingredient:</u>	<u>Wt. %</u>
A	Deionized Water	67.8
	Xanthan Gum	0.5
B	Stearalkonium Chloride	6.0
C	Stearyl Alcohol (and)	
	Ceteareth 20	3.5
	Isopropyl Palmitate	1.0
	Dimethicone	0.5
D	Deionized Water	20.0
	Hydrolyzed Animal Protein	0.2
	Quaternium 15	0.2
E	Fragrance	0.3
	Citric Acid	Q.S.

pH: 4.5-5.0

Viscosity: 6,500 cps

Appearance: White, opaque cream

Procedure:

Disperse the xanthan gum in the Part A water, heating to 65C (150F). When uniform, add the M-Quat JS-25. Pre-mix the Part C ingredients, heating to 65C (150F). Add Part C to the batch and cool to 45C (110F). Pre-mix Part D and add it to the batch. When uniform, blend in fragrance and adjust the pH. Formula B-103

Cold-Mix Hair Conditioner

A clear, nearly water-white product containing three conditioning agents.

<u>Part:</u>	<u>Ingredient:</u>	<u>Wt. %</u>
A	Deionized Water	83.3
	Stearamine Oxide	1.2
	Soya Ethyldimonium	
	Ethosulfate	2.5
	Olealkonium Chloride	1.0
	Hydroxyethyl Cellulose	1.5
	Triethanolamine	0.5
B	Propylene Glycol	10.0
	Preservative	QS
	Citric Acid	QS

pH: 5.0-5.5

Viscosity: 8000-8,500 cps

Appearance: Clear, very pale yellow, viscous liquid

Procedure:

Blend in the first four ingredients. When clear and uniform, add the hydroxyethyl cellulose and allow to disperse. Add the triethanolamine to increase the batch pH and initiate hydration of the cellulose. When hydration is complete, add the Part B ingredients. No heating is required.

Note:

If desired, the product can be pearlized by the addition of a pearl premix at 3-5%.

SOURCE: Mazer Chemicals; Formulation B-106



Hair Conditioner with Protein

Phase A:	<u>% Weight</u>
Water	82.05
Phase B:	
Stearyl Alcohol	1.80
Glyceryl Stearate	0.90
Petrolatum, USP	1.80
Phase C:	
Cetrimonium Chloride	1.25
Water	10.00
Hydrolyzed Animal Protein (Crotein SPA)	2.00
Phase D:	
Suttocide A, 50% Solution	0.20

Procedure:

Heat water to 80C. Combine Phase B and heat to 80C with mixing until all ingredients are melted. Add Phase B to water at 80C and continue mixing for 10 minutes. Cool to 40-45C, add Phase C and allow to mix for 5 minutes. Combine Phase D and add to batch. Add Phase E. Cool to room temperature and adjust pH to 5.0.

Clear Crothix Conditioner

	<u>% Weight</u>
Minkamidopropalkonium Chloride (Incroquat Mink-85)	2.00
Acetamidopropyl Trimonium Chloride (Incromectant AQ)	3.00
Oleth-20 (Volpo 20)	4.80
Polyol Alkoxy Ester (Crothix)	2.10
Water	87.10
Germaben II	1.00

Procedure:

Combine the water and the Volpo 20 and heat to 65C while mixing. Add the Crothix and continue mixing until homogeneous. Continue mixing and cool to 40C. Then add the remaining ingredients and mix until homogeneous.

SOURCE: Sutton Laboratories: Suggested Formulations

**Hair Conditioner and Set**  
**(For Use With Hot Air Dryer)**

This formulation is designed for application to the hair after shampooing, and prior to drying. A quantity of polymer is included to provide a texturizing effect and some setting properties to the hair. Hair conditioning is accomplished by means of the lanolin-related attributes of Laneto 50. The completed product is a clear, water-thin liquid which can be applied by means of a mechanical sprayer.

<u>Ingredients:</u>	<u>% W/W</u>
1. SD Alcohol 40	30.00
2. Triethanolamine (50%)	0.06
3. Butyl Ester of PVM/MA Copolymer	1.50
4. dl-Panthenol	0.50
5. Benzophenone-2	0.05
6. Fragrance	QS
7. Laneto 50	2.00
8. Color	QS
9. Distilled Water	65.89

**Compounding Procedure:**

Weigh and add all ingredients in order into a container and begin stirring. Stir until a homogeneous dispersion results. Fill into suitable containers.

**Note:** Use an "explosion proof" mixer.

Formulation HB-89-PA-3

**Conditioning-Styling Mousse**

A low solids mousse with Celquat as the holding agent.

dl-Panthenol and Supersat AWS 4 are humectants and plasticizers.

<u>Ingredients:</u>	<u>% W/W</u>
1. dl-Panthenol	0.50
2. Celquat L-200	1.00
3. Distilled Water	72.75
4. SD Alcohol 40	15.00
5. Supersat AWS 4	0.50
6. Ritabate 20	0.15
7. Stearic Acid	0.10
8. Preservative and Fragrance	QS
9. Propellant A-46	+-10.00

**Compounding Procedure:**

Slowly sift Celquat into distilled water while mixing. When homogeneous, add remaining ingredients, filter and fill aerosols. Charge propellant.

**Directions:**

Shampoo, rinse and towel dry hair. Shake can well, invert and press button to dispense egg-sized amount of foam into palm of hand. Adjust amount, depending on hair length and amount of control desired. Massage evenly through hair. Do not rinse out. Style hair as desired.

**Note:** Use explosion proof equipment.

Formulation HB-89-PA-13

**SOURCE:** R.I.T.A. Corp.; Suggested Formulations

Hair Conditioning Creme Rinse

Glucquat 125, the cationic substantive conditioning agent in this formula, provides good wet combing, manageability, shine and feel properties. Promulgen D acts as an o/w emulsifier. Cellosize Polymer PCG-10 helps build viscosity.

Glucquat 125 (Lauryl Methyl Gluceth-10 Hydroxypropyldimonium Chloride)	12.0%
Cellosize Polymer PCG-10 (Hydroxyethylcellulose)	0.6
Promulgen D (Cetearyl Alcohol and Ceteareth-20)	4.5
Cetal (Cetyl Alcohol)	1.2
Hydrolyzed Protein	0.3
Deionized Water	81.4
Perfume and Preservative	q.s.

Procedure:

Add Cellosize Polymer PCG-10 to room temperature water with propeller agitation. Heat to 75°C. When polymer is fully hydrated, add Glucquat 125, hydrolyzed protein and preservative, in that order, waiting for each ingredient to dissolve before adding the next. In a separate container, heat Promulgen D and Cetal to 75°C, mix, and add to batch. Mix until uniform, and cool to room temperature with adequate mixing.

Formulation T60-150-4

Curl Activator

Clear product applied via pump spray. Glucquat 125 helps in curl activation by maintaining moisture while it conditions the hair, leaving it more manageable. In addition, it contributes to sheen along with the Ucon LB-1715.

Glucquat 125 (Lauryl Methyl Gluceth-10 Hydroxypropyl Dimonium Chloride)	12.00%
Deionized water	23.00
Ucon LB-1715 (PPG-40 Butyl Ether)	15.00
SD Alcohol 40	50.00

Procedure:

Add Glucquat 125 to deionized water. Separately dissolve Ucon LB-1715 into SD Alcohol 40. Combine phases and mix until uniform. Package in a pump sprayer.

Formulation T62-76-4

SOURCE: Amerchol Corp.: Suggested Formulations

Hair Finishing Mist

Designed for pump-spray application, this non-VOC and oil-free formula provides moisturization, gloss, and detangling benefits to treated or damaged hair.

<u>Ingredient:</u>	<u>Wt. %</u>
Propylene Glycol	23.0
Methyl Paraben	0.2
PPG-10 Butanediol	Macol 57 21.0
Dimethicone Copolyol	Masil 280 1.0
Fragrance	Q.S.
Deionized Water	54.0
Imidazolidinyl Urea	Germall 115 0.2
Silk Amino Acids	Crosilk Liquid 0.5
Triethanolamine, 50%	0.1

pH: 6.0-6.5

Appearance: Clear, water-white liquid

Procedure:

Dissolve the methyl paraben in the propylene glycol. Add the Macol 57, Masil 280, and fragrance, and mix until uniform. Add the remaining ingredients in order, mixing until uniform.

SOURCE: PPG Industries, Inc.: Formulation D-107

Comb Through Glosser

<u>Ingredients:</u>	<u>% w/w</u>
Cyclomethicone (and) Dimethiconol (and) Dimethicone (Abil OSW-12)	68.0
Phenyl Dimethicone (Abil AV-20)	20.0
Dimethicone (Abil 500)	2.0
Dimethicone (Abil 1000)	10.0
Fragrance	Q.S.

Combine ingredients in order - mixing well.

Caution - Traces of water will cause turbidity.

SOURCE: Goldschmidt Chemical Corp.: Suggested Formulation

Hair Pomade

This hair pomade contains Simchin brand Jojoba Oil for increased gloss. The substantive Pationic SSL provides moisturizing and conditioning. Added elegance and moisturization for healthier looking hair are achieved by the use of Panthenol which thickens the fiber and repairs damage.

<u>Ingredients:</u>	<u>% W/W</u>
1. Mineral Oil	5.00
2. Simchin	2.00
3. Petrolatum	88.00
4. Lanolin	2.00
5. dl-Panthenol	0.50
6. Pationic SSL	2.50
7. Color, Fragrance and Preservatives	QS

Compounding Procedure:

Blend ingredients 1-6 and heat to 160F. Stir until uniform. Cool to 135F, add fragrance, preservatives and color. Fill into proper containers.

Formulation HB-89-PA-2

Hair Pomade

This hair pomade contains Simchin brand Jojoba Oil and Shebu brand Shea Butter for increased gloss. The Pationic SSL provides emulsification, moisturization and conditioning. Added elegance and moisturization for healthier looking hair are achieved by the use of dl-Panthenol.

<u>Ingredients:</u>	<u>% W/W</u>
1. Mineral Oil	5.00
2. Simchin	2.00
3. Petrolatum	86.10
4. Shebu	2.00
5. Lanolin USP	2.00
6. dl-Panthenol	0.50
7. Pationic SSL	2.40
8. Color, Fragrance, Preservative	QS

Compounding Procedure:

Blend items 1 through 7 and heat to 70C. Stir until uniform. Cool to 40C. Add remaining ingredients. Fill into proper containers.

Formulation H-89-S-6

SOURCE: R.I.T.A. Corp.: Suggested Formulations

**Hair Pomade**

A quality hair pomade which gives excellent luster and feel from the Simchin and Shebu. Easy spreadability, conditioning and moisturizing are obtained from Pationic ISL, with the benefits of lanolin coming from the Ritawax and Ritalan.

<u>Ingredients:</u>	<u>% W/W</u>
1. Ritawax	1.50
2. Mineral Oil	5.00
3. Simchin	2.00
4. Shebu	1.00
5. Petrolatum	85.00
6. Ritalan	3.00
7. Pationic ISL	2.50
8. Color, Fragrance and Preservatives	QS

**Compounding Procedure:**

Blend items 1 through 7 and heat until clear. Cool with mixing to 50C. Add color, perfume and preservative. Fill hot. Mix during filling.

Formulation H-89-S-8

**Hair Pomade**

A high quality pomade with good luster contributed by Simchin and Shebu. Conditioning and moisturizing are obtained with Pationic ISL. Ritalan adds the benefits derived from lanolin.

<u>Ingredients:</u>	<u>% W/W</u>
1. Mineral Oil	5.00
2. Simchin	2.00
3. Shebu	1.00
4. Petrolatum	86.50
5. Ritalan	3.00
6. Pationic ISL	2.50
7. Color, Fragrance and Preservatives	QS

**Compounding Procedure:**

Combine items 1 through 6 and heat until clear. Cool with mixing to 50C. Add color, perfume and preservatives. Fill hot. Mix while filling.

Formulation H-89-S-9

**SOURCE: R.I.T.A. Corp.: Suggested Formulations**

Hair Relaxer

Super strength sodium hydroxide based hair relaxer.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Ritachol 2000	15.00
2. Mineral Oil	17.00
3. Ritachol	2.00
4. Petrolatum	17.50
5. Ritahydrox	0.50
6. Propylparaben	0.13
7. Rita SA	2.00
Part B:	
8. Glycerin	6.00
9. Distilled Water	29.67
10. Methylparaben	0.20
Part C:	
11. Sodium Hydroxide (25% Solution)	10.00

Compounding Procedure:

Weigh Part A and heat to 78 to 82C. Weigh Part B and heat to 50C and add 25% Sodium Hydroxide solution and raise temperature to 75C. When both parts are at temperature, add Part B to Part A slowly, avoiding aeration. Cool to 25C.

Formulation 106-95A

Hair Relaxer

Super strength sodium hydroxide based hair relaxer.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Ritachol 2000	15.00
2. Mineral Oil	17.00
3. Ritachol	2.00
4. Petrolatum	17.50
5. Ritahydrox	0.50
6. Propylparaben	0.13
7. Rita SA	2.00
Part B:	
8. Propylene Glycol	9.00
9. Distilled Water	26.67
10. Methylparaben	0.20
Part C:	
11. Sodium Hydroxide (25% Solution)	10.00

Compounding Procedure:

Weigh Part A and heat to 78 to 82C. Weigh Part B and heat to 78 to 82C. When both parts are at temperature, slowly add Part B to Part A. Avoid aeration. Cool to 65C, avoiding aeration. Add 25% Sodium Hydroxide solution, avoiding aeration. Cool to 25C with cold water bath.

Formulation 106-80

SOURCE: R.I.T.A. Corp.: Suggested Formulations

**Hair Repair and Conditioner**

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Water	88.10
Glyceryl Stearate S.E. (Tegin)	4.00
Mineral Oil	1.00
Cetyl Alcohol	2.00
Phenyl Trimethicone (Abil AV-20)	0.50
Ceteth-2	1.00
Phase B:	
Glycerin	1.00
Propylene Glycol	1.00
Dimethicone/Sodium Poly PG-Propyl Dimethicone Thiosulfate Copolymer (Abil S 201)	1.00
Quaternium-80 (Abil Quat 3272)	0.40
Phase C:	
Color	Q.S.
Preservatives	Q.S.
Fragrance	Q.S.
Citric Acid (25% Solution)	to pH 6.5

**Procedure:**

1. Heat the ingredients of A together with mixing to 70C.
2. Cool to 45-50C. Switch to sweep mixer.
3. Blend B. Add to A. Sweep mix. Cool to 35-40C.
4. Adjust pH. Add Color, Fragrance and Preservatives.

**Soft Set Conditioning Mousse**

This conditioning mousse formulation provides for both a soft, nontacky hold to a hair set and a conditioning effect on the hair fibers. The Dimethicone/Sodium Poly PG-propyl Dimethicone Thio-sulfate Copolymer contributes gloss and hydrophobicity to the hair.

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Water	82.20
Stearamidopropyl PG-Dimonium Chloride Phosphate	3.00
Phase B:	
Isopropyl Alcohol	10.00
Dimethicone/Sodium Poly PG-propyl Dimethicone Thiosulfate Copolymer (Abil S-201)	0.50
Aminomethyl Propanol	0.30
Butyl Ester of PVP/MA copolymer	2.00
Phase C:	
Dimethicone Copolyol (Abil B 8851)	2.00
Phase D:	
Fragrance, Preservatives	Q.S.
Fill: Concentrate	83.30
Isobutane	16.70

**Procedure:**

Mix (A). Heat to 65C and continue to mix until homogeneous. Cool to 40C. Separately mix (B) at 25C until homogeneous. Add (A) to (B) with stirring. Add (C), (D), mix until homogeneous. Add fragrance, coloring and preservative as required. Cool to 25C. Charge into aerosol container. Add propellant.

**SOURCE:** Goldschmidt Chemical Corp.: Suggested Formulations



**Hair and Scalp Conditioner**

The formulation given here is a smooth, creamy-textured dispersion. The product contains a quantity of paraffin wax, which is used to adjust the melting point of the composition so that it approximates the temperature of the surface of the scalp. The formulation contains Ritachol, which provides lanolin alcohol related conditioning attributes, sheen, and lubricity to the hair fiber, as well as to the scalp. Forlan L has been added to improve the homogeneity of the dispersion and for its conditioning and lubricity characteristics. Forlan L also improves the reversion resistance of straightened hair in high humidity.

<u>Ingredients:</u>	<u>% W/W</u>
1. Mineral Oil	+35.75
2. Petrolatum	45.00
3. Paraffin Wax	9.00
4. Ritachol	3.00
5. Forlan L	5.00
6. Patlac IL	2.00
7. Perfume	QS
8. BHA	0.10
9. Propylparaben	0.15

**Compounding Procedures:**

Mix all ingredients, except perfume. Heat with stirring to 60-65C. Cool to 50-55C, add perfume. Cool to 48-50C and package into suitable containers.

Formulation HB-89-R-9

**Light Hair Conditioner**

A pomade type hair conditioner with good grooming properties which improves combability.

<u>Ingredients:</u>	<u>% W/W</u>
1. Paraffin	10.70
2. Petrolatum	+49.15
3. Mineral Oil 90	30.00
4. BHA	0.10
5. Propylparaben	0.05
6. Forlan L	5.00
7. Ritachol	3.00
8. Patlac IL	2.00
9. Perfume and Color	QS

**Compounding Procedure:**

Mix all ingredients, except perfume and color. Heat with stirring to 60-65C. Cool to 43C, add perfume and color. Package fluid at 42-43C.

Formulation HB-89-R-8

**SOURCE: R.I.T.A. Corp.: Suggested Formulations**

**Hair Setting Gel**

A water based setting gel with Simchin WS and Shebu WS for luster and conditioning. The setting agent is plasticized with Supersat AWS 4. dl-Panthenol provides humectant benefits.

**Ingredient:** % W/W

Part A:	
1. Distilled Water	50.00
2. Acritamer 940	0.70
Part B:	
3. Distilled Water	36.50
4. Glycerin	4.00
5. Simchin WS	2.00
6. Shebu WS	2.00
7. Supersat AWS 4	1.00
8. PVP K-30	2.00
9. Methylparaben	0.20
10. dl-Panthenol	0.20
11. Triethanolamine (50%)	1.40
Part C:	
12. Color, Fragrance	QS

**Compounding Procedure:**

Weigh water and slowly sprinkle in Acritamer while stirring with a variable speed agitator capable of imparting relatively high shear. Stir until the Acritamer 940 has thoroughly dispersed and hydrated and no lumps can be seen or felt. In a separate container, combine Part B and heat slightly until solids dissolve completely. Mix thoroughly. Mix thoroughly. Add Part B to the Acritamer solution, stirring slowly until homogeneous. Add color and fragrance.

**Note:** A fragrance with good water solubility should be used, or add a solubilizer, such as Ritoeth 5 or Ritabate 20 into fragrance.

Formulation H-89-S-10

**Hair Gel**

A clear Carbomer gel with emollients and humectants. The high glycerin content makes it usable as a curl activator product.

The dl-Panthenol aids the humectancy and coats the hair to repair damage and improve luster.

**Ingredients:** % W/W

1. Distilled Water	81.10
2. Acritamer 940	0.80
3. Glycerin	10.00
4. Propylene Glycol	5.00
5. Dimethicone Copolyol	1.00
6. dl-Panthenol	0.80
7. Laneto 50	0.50
8. Color, Fragrance and Preservative	QS
9. Triethanolamine (99%)	0.80

**Compounding Procedure:**

Disperse item 2 into 90% of the water without incorporation of air. Add item 3 to item 8. Mix gently to avoid air. Combine item 9 with balance of water. Add to batch. Mix gently-avoid air.

Formulation HB-89-PA-17

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Hair Setting Lotion Containing a Chitosan DerivativeExample 1:

Chitosan (having 90% free amino groups)	1.0g
Acetic acid (10%)	3.36g
Sorbic acid	1.0g
Water, completely desalted	95.54g

20 ml of this solution are spread on the washed, towel-dry hair and the hair is then set and dried as customary.

Example 2:

Chitosan (having 90% free amino groups)	0.6g
Formic acid (10%)	1.56g
Isopropanol	25.0g
Water, completely desalted	72.84g

20 ml of this solution are spread on the washed, towel-dry hair and the hair is then set and dried as customary.

Example 3:

Chitosan (having 90% free amino groups)	1.5g
Lactic acid (10%)	7.4g
Sorbic acid	0.1g
Water, completely desalted	91.0g

20 ml of this solution are spread on the washed, towel-dry hair and the hair is then set and dried as customary.

Example 4

Chitosan (having 90% free amino groups)	1.00g
Acetic acid (10%)	3.36g
Cetyltrimethylammoniumchloride (50% aqueous-alcoholic solution)	0.10g
C.I. Basic Violet 1	0.05g
Water, completely desalted	95.49g

20 ml of this solution are spread on the washed, towel-dry hair and the hair is then set and dried as customary. The hair thereafter exhibited a slight bluish tint.

**SOURCE:** Amerchol Corp.: Product Patent: Hair Setting Lotion  
Containing a Chitosan Derivative: Formulas

**Hair Styling Gel with Oil**

A non-mineral oil grooming gel with moisturizer and film former.

<u><b>Ingredients:</b></u>	<u><b>% W/W</b></u>
Part A:	
1. Acritamer 940	0.60
2. Distilled Water	66.70
3. Glycerin	5.00
4. SD Alcohol 40	10.00
Part B:	
5. Laneto 50	5.00
6. PPG-12-Buteth-16	10.00
7. PVP	1.50
8. Supersat AWS 4	1.00
Part C:	
9. Diisopropanolamine	0.20
Part D:	
10. Color, Fragrance, Preservatives	QS

**Compounding Procedure:**

Combine water, glycerin and alcohol in main mixing tank with impeller agitation and mix until uniform. Sprinkle in Acritamer to complete Part A. Mix until uniform. Combine materials of Part B and mix until uniform. Add Part B to Part A with mixing. Mix until uniform. Add Part C. Mix until uniform. Add color, fragrance and preservative. Package.

Formulation H-89-A-17

**Hair Setting Gel**

A non-mineral oil, soft holding hair setting gel with glycerin and film former.

<u><b>Ingredients:</b></u>	<u><b>% W/W</b></u>
Part A:	
1. Acritamer 940	0.70
2. Distilled Water	49.30
Part B:	
3. Distilled Water	41.60
4. PVP K-30	2.00
5. Supersat AWS 4	1.00
6. Glycerin	4.00
7. Triethanolamine (50%)	1.40
Part C:	
8. Color, Fragrance, Preservatives	QS

**Compounding Procedure:**

Disperse Acritamer in Part A water in main mixing tank with impeller. Combine the materials in Part B and heat until Supersat is melted. Mix until uniform. Add Part B to Part A and mix until uniform. Add Part C to Parts A and B and mix until uniform. Package.

Formulation H-89-A-18/Ref. 114-93

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Highlighting Hair Gel

A quick-drying, hydro-alcoholic gel which imparts pearlescent highlights to hair. It can be packaged into a jar, tube, or automatic mascara-type container.

<u>Phase:</u>	<u>Ingredients:</u>	<u>% wt.</u>
A.	Carbomer 940 - 2% Solution (Acritamer 940)	40.00
	Methyl Gluceth-20 (Glucam E-20)	2.00
	Propylene Glycol	2.00
	Glycerin	1.00
	Panthenol (DL-Panthenol)	1.00
B.	Water	2.00
	Triethanolamine	1.00
C.	Water (q.s. to 100%)	29.80
	Sodium Hexametaphosphate	0.10
	Antimicrobials	q.s.
D.	Cloisonne' Super Gold 232Z	5.00
E.	SD Alcohol 40	15.00
F.	PVP (PVP-K30)	2.00

Procedure:

- I. Mix all the ingredients in Phase A in suitable vessel until completely uniform.
- II. Add pre-mixed Phase B to Phase A while mixing until completely uniform.
- III. In a separate vessel combine all ingredients in Phase C.
- IV. Disperse Phase D into Phase C.
- V. Add Phase E to Phase C and mix.
- VI. Add Phase F to Phase C and mix.
- VII. Add pre-mixed Phase C, D, E and F to pre-mixed Phase A-B and mix until completely uniform.

SOURCE: The Mearl Corp.: Formulation CLH-921237

**Instant Hair Conditioner**

A viscous, opaque hair conditioner with reduced eye irritation.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Grilloten LSE 87K	2.00
2. Grilloten PSE 141G	4.00
3. Cetearyl Alcohol	2.50
4. PEG-20 Cetearyl Alcohol	0.50
5. Alcohol Glycol Ether	4.00
6. Gafquat N755	1.00
7. Polyquart H-81	1.00
Part B:	
8. Glycerin	3.00
9. Distilled Water	82.00
Part C:	
10. Perfume	QS
11. Citric Acid (25% Solution)	QS
12. Preservative	QS

**Compounding Procedure:**

Combine the materials in Part A. Heat to 150F with agitation. Combine Glycerin and water in part B and heat to 150F with agitation. Add Part A to Part B. Avoid aeration. Cool to 120F. Add perfume and preservative. Cool to 95F. Adjust to pH of 4.0 to 4.4 with Citric Acid.

Formulation H-89-G-26

**Instant Hair Conditioner**

An opaque viscous conditioning and reparative hair conditioner. Conditions, moisturizes and adds body. Product is designed to be applied, left on the hair 2-3 minutes and then rinsed.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	97.00
2. Jaguar C-13 S	0.75
3. Pationic ISL	0.50
4. Patlac IL	0.40
5. Ritoleth 20	0.30
6. Cetyl Alcohol	0.75
7. Sorbic Acid	0.20
8. Methylparaben	0.10
9. Patlac LA (44%)	QS
10. Perfume	QS

**Compounding Procedure:**

Disperse Jaguar in water in the main mixing kettle, heat to 75C. Allow to stand for one hour, enough to de-aerate. Combine the remaining materials, except Patlac LA and perfume in an auxiliary tank. Heat to 75C. Add This mixture to the Jaguar solution with agitation while both are at 75C. Cool to 45C with agitation. Add perfume, adjust pH to 4.5 with Patlac LA.

pH: 4.5+-0.2

Viscosity: 3,000 cps

Formulation H-89-P-9

SOURCE: R.I.T.A. Corp.; Suggested Formulations

Liquid Brilliantine

This brilliant, colorless liquid imparts a high gloss to the hair.

Liquid Brilliantine with Protein(514143)

Drakeol 7, Light Mineral Oil USP	96.7%
Diisopropyl Adipate	2.5
Olive Oil	0.6
Isostearyl Hydrolyzed Animal Protein	0.2
Fragrance	q.s.

Combine all ingredients except fragrance and heat slowly to 60C while stirring until a homogeneous liquid blend is evident. Cool to 40C with stirring then add fragrance. Cool to room temperature and package.

Solid Brilliantine

These solids aid in moisture retention, hold hair in place, and add shine. Solid Brilliantine II is softer than Solid Brilliantine I.

Solid Brilliantine I with Sunscreen(514693)

Penreco Ultima, White Petrolatum USP	62.00 wt%
Microcrystalline wax	24.00
Drakeol 35, White Mineral Oil	7.80
Dimethicone, 350 vis	3.28
Isopropyl myristate	2.52
Sunscreen	0.20
Propylparaben	0.20

Melt all the ingredients together at 75C with gentle stirring. When the blend is uniform, allow it to cool and pour into containers just above the solidification point. If fragrance is desired, it should be added at 45C.

Solid Brilliantine II(514108)

Penreco Ultima, White Petrolatum USP	60.00wt%
Drakeol 9, Light Mineral Oil	34.85
Butyl Stearate	5.00
Butylparaben	0.15

Heat all ingredients slowly to 80C with moderate stirring. Once the mixture is homogeneous, cool and fill containers just above the product's set point. If desired, fragrance may be added at 45C.

SOURCE: Penreco: Penreco Cosmetic Formulary

Lotion Moisturizer

A water in oil lotion product for use on hair or skin. This is a high oil content formula which is expected to leave substantial residue.

Ingredients: % W/W

Part A:	
1. Mineral Oil	25.50
2. Lanolin, Extra Deodorized	5.00
3. Beeswax	3.00
4. Petrolatum	0.50
5. Octyl Dimethyl PABA	0.50
6. Ritahydrox	0.25
7. Propylparaben	0.10
Part B:	
8. Distilled Water	63.69
9. Sorbitan Oleate	0.80
10. Borax	0.26
11. dl-Panthenol	0.10
Part C:	
12. Fragrance	0.30

Compounding Procedures:

Heat Part A and Part B to 165F. Add Part A to Part B with agitation. Cool to 120F. Add Part C. Mix to room temperature. Package.

Initial Viscosity: 4000 cps

Formulation 101-62

Oil Moisturizer Lotion

This oil moisturizer gives hair a soft, natural sheen while adding substantivity through the use of Pationic CSL. It also contains dl Panthenol (Vitamin B) to nurture the hair and the sunscreen to reduce the damaging effects of the sun. Pationic CSL is used in this water in oil emulsion to eliminate the need for beeswax/borax.

Ingredients: % W/W

Part A:	
1. Mineral Oil	25.50
2. Lanolin, Extra Deodorized	5.00
3. Petrolatum	0.50
4. Pationic CSL	3.00
5. Octyl Dimethyl PABA	0.50
6. Ritahydrox	0.30
7. Propylparaben	0.10
Part B:	
8. Distilled Water	63.90
9. dl-Panthenol	0.10
10. Sorbitan Monooleate	0.80
11. Methylparaben	0.10
Part C:	
14. Fragrance	0.20

Heat Part A and Part B to 165F. Add Part A to Part B with mixing. Cool to 120F, add Part C. Cool to 80F with mixing.

Viscosity: 4000 cps.

SOURCE: R.I.T.A. Corp.: Formulation 104-74/HB-89-L-33



**Moisturizing Conditioner**

<u>Ingredients:</u>	<u>% by Weight</u>
Deionized water	90.00
Neobee M-5	3.35
Kessco Cetyl Alcohol	2.20
Stearyl alcohol	1.25
Wecobee S	1.20
Ammonyx Cetac	1.00
Hydroxyethylcellulose	0.50
DMDM hydantoin	0.25
Propyl paraben	0.25
Fragrance	Q.S.

**Mixing Procedure:****Phase A:**

Add deionized water to a suitable mixing vessel and begin heating. Start mixing water and slowly disperse the hydroxyethylcellulose (avoid clumping). Add DMDM hydantoin and Ammonyx Cetac to the water phase, making sure to allow good agitation after each addition. Maintain heat at 65C.

**Phase B:**

Add Cetyl Alcohol, Stearyl Alcohol, Neobee M-5, Wecobee S, and Propyl Paraben to a separate mixing vessel. Heat to 65C and maintain at this temperature. Add the oil phase to the water phase slowly using quick agitation. Continue quick agitation for 10-15 minutes, making sure temperature doesn't exceed 67C. Slow agitation to moderate speed and begin cooling until temperature reaches 40C. Add fragrance and color if desired. Cool to 25C and fill.

**Typical Properties:**

White slightly viscous cream

Viscosity: 13,000 cps

Passed elevated temperature and freeze thaw study

Formulation No. 592

**Clear Hair Conditioner**

<u>Ingredients:</u>	<u>% by Weight</u>
Ammonyx KP	3.00
Ammonyx Cetac	1.50
Propylene glycol	1.50
Hydroxyethylcellulose	0.90
Polyquaternium 10	0.25
Fragrance, dye, preservative	Q.S.
D.I. water	Q.S. to 100

**Mixing Procedure:**

Disperse hydroxyethylcellulose in D.I. water with mixing until clear. Add Ammonyx KP and mix until homogeneous. Slowly add Ammonyx Cetac and mix until homogeneous. Disperse Polyquaternium-10 in propylene glycol and add to above solution with mixing until clear. Add fragrance, dye and preservative, if desired.

**Typical Properties:**

Clear liquid

pH (as is): 5.5

Freeze thaw and elevated heat stable

Viscosity: 750 cps

SOURCE: Stepan Co.: Formulation No. 420

**Moisturizing Elastin Hair Styling Gel**

This is a setting gel with a non-greasy water soluble oil. The Laneto 50 is used to solubilize the perfume oil and add the benefits of conditioning and shine. The Ritalastin EL30 (elastin) is added for superior protein benefits. dl-Panthenol is used to moisturize and condition. Ritaphenone 3 protects against UV damage.

<u>Ingredients:</u>	<u>% W/W</u>
1. Acritamer 940	0.60
2. Distilled Water	63.90
3. Glycerin	10.00
4. dl-Panthenol	0.20
5. Alcohol	10.00
6. Laneto 50	5.00
7. Ritaphenone 3	0.10
8. Tetrasodium EDTA	0.10
9. PPG-12-Buteth-16	5.00
10. PVP	1.50
11. Fragrance, Preservatives and Color	QS
12. Triethanolamine (99%)	0.60
13. Ritalastin EL 30	3.00

**Compounding Procedure:**

Add the preservatives to one-half of the water. Stir until clear. Disperse the Acritamer 940 in the glycerin and add to the water phase and stir until clear. Make a 10% solution of the triethanolamine and set aside. Combine the remaining ingredients, stir until clear. Add to the Acritamer 940 solution. Stir until clear. Allow all air to be removed with gentle stirring, then add the triethanolamine solution. This will thicken the product. Fill into proper containers when uniform.

Formulation HB-89-PA-15

**Pump Spray Hair Detangler**

A cationic based detangler spray with conditioners and moisturizers. dl-Panthenol is an effective moisturizer, emollient and conditioner for hair. It is used to give hair a healthy shine. Simchin WS is a water soluble jojoba oil derivative. It serves as a super fatting and foam stabilizing agent, as well as a plasticizer. Supersat AWS 4 is an emollient and conditioning agent, leaving a film, which is neither sticky nor tacky, but velvety smooth, and has exceptional slip and spreadability.

<u>Ingredients:</u>	<u>% W/W</u>
1. Cetyl Trimethyl Ammonium Chloride	5.00
2. Distilled Water	85.50
3. Dimethicone Copolyol	1.00
4. Supersat AWS 4	1.00
5. Glycerin	4.00
6. Propylene Glycol	2.00
7. dl-Panthenol	1.00
8. Simchin WS	0.50
9. Color, Fragrance, Preservatives	QS

**Compounding Procedure:**

Heat water to 87C. Add Supersat AWS 4. Mix until clear. Add remaining ingredients while cooling to 40C. Fill into proper containers.

SOURCE: R.I.T.A. Corp.: Formulation HB-89-PA-21

**Opaque Hair and Scalp Moisturizer**

This moisturizer is especially designed for use after a curl relaxer to rebalance pH of the scalp and hair cuticle. It is substantive and reparative.

**Ingredients:**

	<u>% W/W</u>
Part A:	
1. Polypeptide LSN	3.00
2. DL Panthenol	1.00
3. Ritamectant K2	0.20
4. Grillocin HY-77	1.00
5. Pationic ISL	2.00
6. Glycerin	2.00
7. Distilled Water	73.90
8. Laneto 50	1.00
Part B:	
9. Ritapeg 150 DS	3.00
10. Rita EGDS	2.00
11. Rita GMS	3.00
12. PEG 100 Stearate	0.60
13. Patlac IL	1.00
14. Myristyl Lactate	1.00
Part C:	
15. Methocel E4M	0.50
Part D:	
16. Patlac LA (44%)	+ -4.00
17. Germall II	0.80

**Compounding Procedure:**

Weigh and heat Part B in an auxiliary kettle to 165F. Add Part C with agitation until dispersed. Heat Part A to 165F in the main mixing kettle. Add oil phase (Parts B and C) to Part A with agitation. Maintain heat and mix until uniform. Cool to 110F. Add Germall II. Adjust pH to 3.5 with Patlac LA.

Formulation HB-89-L-12

**Hair Moisturizer**

This product leaves hair easy to comb. The hair is protected and moisturized by the Shebu.

**Ingredients:**

	<u>% W/W</u>
Part A:	
1. Ritachol O	3.00
2. Shebu Refined	1.00
3. Ritoleth 10	0.50
Part B:	
4. Cetrimonium Chloride	0.50
5. Glycerin	5.00
6. Distilled Water	+ -90.00
7. Color, France & Preservative	QS

**Compounding Procedures:**

Combine Part A in an auxiliary kettle and heat to 70C. Combine Part B in the main kettle and heat to 70C. Add Part A to Part B. Mix until uniform. Cool with mixing to 40C. Add remaining ingredients.

Formulation HB-89-R-10

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Pomade

These pomade formulas are designed to provide a variety of textures and consistencies. They are starting points from which a product of the characteristics the formulator wants can be developed. Pomades can be made harder by increasing the amount of wax in the formula, or by substituting Penreco Ultima Petrolatum for Penreco Snow petrolatum. All of these pomades are light in color, slightly translucent, and can be drawn into classic petrolatum peaks.

Pomade(514991)

Penreco Snow, White Petrolatum USP	96.0 wt%
Paraffin Wax	4.0
Fragrance	q.s.

Pomade with Lanolin(514992)

Penreco Snow, White Petrolatum USP	94.0 wt%
Paraffin Wax	5.0
Lanolin	1.0
Fragrance	q.s.

Pomade with Protein(514993)

Penreco Snow, White Petrolatum USP	98.0 wt%
Drakeol 9, Light Mineral Oil USP	1.5
Isostearyl Hydrolyzed Animal Protein	0.5
Fragrance	q.s.

Heat slowly to 85C with moderate stirring. Hold at this temperature until mixture is uniform, then allow blend to cool to 45C. Add fragrance and color if desired, then fill containers just above set point of product.

SOURCE: Penreco: Penreco Cosmetic Formulary

Pomade Hair Dressing

Petrolatum-based dressing with improved spreading and sheen

<u>Ingredient:</u>		<u>Wt. %</u>
Petrolatum	Snow White USP	28.0
Ozokerite	White Ozokerite 77W	8.0
Lanolin	Lanolin, Cosmetic	22.0
Mineral Oil	Drakeol 9	32.0
PPG-9	Macol P-500	3.0
Phenyl Trimethicone	Masil SF 556	7.0

Appearance: Light tan, uniform soft solid

Melt Point: 49C (120F)

Procedure:

Heat petrolatum, lanolin, and ozokerite together to 85C (185F) to completely melt the wax. Add the mineral oil, Macol P-500, and Masil SF 556, cooling the batch to 65C (150F). Fill at 58-62C to avoid shrink holes.

SOURCE: Mazer Chemicals: Formulation D-101

Pomade Stick

This formula is a stick hair dressing that imparts sheen and soft hold to the hair.

	<u>% (w/w)</u>
Sodium Stearate C-1	8.00
Glycerine	42.00
Propylene Glycol USP	40.00
Lexquat AMG-O (Oleamidopropyl Dihydroxypropyl Dimonium Chloride)	7.00
PVP K-90 (Polyvinylpyrrolidone)	3.00

Procedure:

Charge the batch vessel with propylene glycol and glycerine. Begin mixing and heating to 78+-2C. Add the sodium stearate C-1 and let it mix. When the sodium stearate is well dispersed, add the Lexquat AMG-O and the PVP-K90. Allow to mix for 15 minutes at 78C then cool to 45C. Add to stick container and allow to cool to room temperature.

SOURCE: Inolex Chemical Co.: Formulation HR-100

**Professional Extra-Strength Relaxer**

Extra strength relaxer with Supersat AWS 4 and Ritaderm as emollients and moisturizers.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Ritachol 1000	12.00
2. Ritaderm	4.00
3. Mineral Oil	13.00
4. Ritachol	2.00
5. Petrolatum	17.50
6. Supersat AWS 4	1.00
Part B:	
7. Glycerin	6.00
8. Distilled Water	35.30
Part C:	
9. Sodium Hydroxide Solution (25%)	9.20

**Compounding Procedure:**

Pre-dissolve sodium hydroxide in water to obtain enough 25% solution for batch. Weigh Part A into sweep type jacketed tank and begin heating to 78-82C. Weigh Part B in a separate tank and begin heating to 78-82C. When both are at temperature, slowly add Part B to Part A avoiding aeration. Cool to 65C. Add sodium hydroxide solution (Part C) with agitation. Avoid aeration. Pump through colloid mill, cool to 25C and package.

Formulation HB-89-R-5

**Professional No Base Relaxer C**

An extra strength, professional relaxer with humectants and emollients to moisturize and prevent dryness.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Ritachol 1000	12.00
2. Ritaderm	2.00
3. Mineral Oil, Light	13.00
4. Ritachol	2.00
5. Petrolatum	17.50
6. Supersat AWS 4	3.00
Part B:	
7. Glycerin	6.00
8. Distilled Water	35.30
Part C:	
9. Sodium Hydroxide (25% solution)	9.20

**Compounding Procedure:**

Pre-dissolve sodium hydroxide in water to obtain enough 25% solution for batch. Weigh Part A into sweep type jacketed tank and begin heating to 78-82C. Weigh Part B in a separate tank and begin heating to 78-82C. Weigh both are at temperature, slowly add Part B to Part A avoiding aeration. Cool to 65C. Add sodium hydroxide solution (Part C) without agitation. Avoid aeration. Pump through colloid mill, cool to 25C and package.

Formulation HB-89-R-13

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Relaxer

Regular strength potassium hydroxide based relaxer.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Ritachol 5000	15.00
2. Mineral Oil 70 wt.	17.00
3. Ritachol	2.00
4. Petrolatum	17.50
5. Ritahydrox	0.50
6. Propylparaben	0.13
7. Stearyl Alcohol	2.00
Part B:	
8. Glycerin	6.00
9. Distilled Water	29.67
10. Methylparaben	0.20
Part C:	
11. Potassium Hydroxide (25% Solution)	10.00

Compounding Procedure:

Weigh Part A and Part B and heat to 78 to 82C. When both parts are at temperature, add Part B to Part A slowly to avoid aeration. Cool to 65C and add Part C slowly to avoid aeration. Cool to 25C. Mill if necessary.

Formulation 109-184

Relaxer

Super strength sodium hydroxide based hair relaxer.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Ritachol 5000	15.00
2. Mineral Oil 70 wt.	17.00
3. Ritachol	2.00
4. Petrolatum	17.50
5. Ritahydrox	0.50
6. Propylparaben	0.13
7. Stearyl Alcohol	2.00
Part B:	
8. Glycerin	6.00
9. Distilled Water	29.67
10. Methylparaben	0.20
Part C:	
11. Sodium Hydroxide (20% Solution)	10.00

Compounding Procedure:

Separately weigh Part A and Part B and heat to 78 to 82C. When both parts are at temperature, add Part B to Part A slowly to avoid aeration. Cool to 65C and add Part C slowly to avoid aeration. Cool to 25C. Mill if necessary.

Formulation 109-202

SOURCE: R.I.T.A. Corp.: Suggested Formulations

**Ringing Gel**

An adaptable clear ringing gel which is suitable as a hair dressing or vehicle for other cosmetic materials where a micro emulsion is desired.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	+54.00
2. Glycerin	10.00
3. Mineral Oil, Light	12.00
4. Ritoleth 5	10.00
5. Supersat AWS 4	12.00
6. Pationic ISL	1.00
7. Simchin WS	1.00
8. Preservative	QS
9. Fragrance and color	QS

**Compounding Procedure:**

Combine items 1, 2 and 7 and heat to 175F. Combine items 3, 4, 5 and 6 and heat to 175F. Add second phase to first phase with agitation. (NOTE: Use an additional 3 to 4% of the weight of the batch as add-back water to compensate for moisture loss. This is important.) Mix until uniform. Begin cooling. Cool to 130F or until thickening begins. Add items 8 and 9. Add back water to compensate for moisture loss. Fill hot. Cover immediately.

Formulation H-89-S-2

**Ringing Gel**

A clear ringing gel suitable as a hair dressing or vehicle for other cosmetic materials.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Distilled Water	42.40
2. Glycerin	15.00
Part B:	
3. Mineral Oil	12.00
4. Ritoleth 5	10.00
5. Supersat AWS 4	17.00
6. Pationic ISL	1.00
7. 2-Phenoxyethanol	2.00
Part C:	
8. Germall II	0.40
9. Perfume	0.20

**Compounding Procedure:**

Heat Part A and Part B to 165F. Add Part B to Part A. Cool to 140F. Add Part C. Pour into jars. Pour temperature-135F to 140F. Note: Be sure to add water to compensate for moisture loss.

If this cannot be weighed, then use 3-4% excess water.

Formulation 109-109

SOURCE: R.I.T.A. Corp.: Suggested Formulations



**Sculpting Gel**

A gum setting gel with emollients and plasticizers. dl-Panthenol helps plasticize the film without losing holding properties and also acts as a humectant.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	92.70
2. Polyquaternium 11	3.00
3. Ritaloe 200M	1.00
4. PVP	0.50
5. Ritoleth 20	0.30
6. Hydroxyethylcellulose	1.00
7. dl-Panthenol	0.50
8. Supersat AWS 4	0.80
9. Simchin WS	0.20
10. Color, Preservative and Fragrance	QS

**Compounding Procedure:**

Heat a small amount of the formula water. Add ingredients 4,5,7 and 8 and dissolve. Add remaining water. No further heating is required. Disperse ingredient 6 into water phase. Mix well. Add remaining ingredients.

Formulation HB-89-PA-7

**Pump Gel Setting Lotion**

A gel setting lotion which can be dispensed from a pump. Contains setting agents anti-stat and humectants. dl-Panthenol is used for repair, humectancy and luster.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	86.50
2. Propylene Glycol	5.00
3. Polyquaternium 4	3.00
4. dl-Panthenol	1.00
5. Ritaloe 200M	1.00
6. Polyquaternium 10	1.00
7. Ritabate 20	1.00
8. Hydroxyethylcellulose	1.00
9. Olealkonium Chloride	0.50
10. Patlac LA (44%)	QS
11. Color, Fragrance and Preservatives	QS

**Compounding Procedure:**

Disperse items 6 and 4 into item 1. Mix well for 30 minutes. Heat to speed solution. Disperse item 8 into batch. Mix for 30 minutes. Add remaining ingredients. Adjust to pH 6 with Patlac LA.

**Note:** For a lower viscosity product, reduce item 8 to 0.5%.

Formulation HB-89-PA-19

**SOURCE:** R.I.T.A. Corp.: Suggested Formulations

Sea Botanical and Herbal Hard to Hold Styling Gel

Phase A:	% Weight
Water	81.70
Calendula Extract	0.10
Chamomile Extract	0.10
Spirulina	0.10
Allantoin	0.05
Phase B:	
Polyglycerylmethacrylate (and) Propylene Glycol (Lubragel MS)	0.20
Carbomer-940 (Carbopol 940)	0.60
Suttocide A, 50% Solution	0.30
Triethanolamine, 85%	0.30
Phase C:	
Water	10.00
PVP(PVP K-30)	2.00
Phase D:	
PVP/VA Copolymer (PVP/VA E-735)	4.00
Phase E:	
PEG-60 Almond Glycerides (Crovol A-70)	0.50
Fragrance	0.05

Meter water into stainless steel mixing tank. Begin heating to 50C. Begin mixing and add rest of Phase A ingredients. Add Phase B ingredients in order given with adequate agitation to insure a homogeneous mixture after each addition. Premix Phase C and add to batch. Add Phase D. Premix Phase E, add to batch and mix until uniform.

Sea Botanical and Herbal Hard to Hold Styling Gel(Alcohol Free)

Phase A:	% Weight
Water	81.70
Calendula Extract	0.10
Chamomile Extract	0.10
Spirulina	0.10
Allantoin	0.05
Phase B:	
Polyglycerylmethacrylate (and) Propylene Glycol (Lubragel MS)	0.20
Carbomer-940 (Carbopol 940)	0.60
Suttocide A, 50% Solution	0.30
Triethanolamine, 85%	0.30
Phase C:	
Water	10.00
PVP (PVP K-30)	2.00
Phase D:	
PVP/VA Copolymer (PVP/VA E735)	4.00
Phase E:	
PEG-60 Almond Glycerides	0.50
Fragrance	0.05

Meter water into stainless steel mixing tank. Begin heating to 50C. Begin mixing and add rest of Phase A ingredients. Add Phase B ingredients in order given with adequate agitation to insure a homogeneous mixture after each addition. Premix Phase C and add to batch. Add Phase D. Premix Phase E, add to batch and mix until uniform.

SOURCE: Sutton Laboratories, Inc.: Suggested Formulations

**Sea Botanical and Herbal Hard to Hold Styling Gel (TEA Free)**

<b>Phase A:</b>	<b>% Weight</b>
Water	81.60
Calendula Extract	0.10
Chamomile Extract	0.10
Spirulina	0.10
Allantoin	0.05
<b>Phase B:</b>	
Polyglycerylmethacrylate (and) Propylene Glycol (Lubragel MS)	0.20
Carbomer-940 (Carbopol 940)	0.60
Suttocide A, 50% Solution	0.70
<b>Phase C:</b>	
Water	10.00
PVP (PVP K-30)	2.00
<b>Phase D:</b>	
PVP/VA Copolymer (PVP/VA E735)	4.00
<b>Phase E:</b>	
PEG-60 Almond Glycerides (Crovol A-70)	0.50
Fragrance	0.05

**Procedure:**

Meter water into stainless steel mixing tank. Begin heating to 50C. Begin mixing and add rest of Phase A ingredients. Add Phase B ingredients in order given with adequate agitation to insure a homogeneous mixture after each addition. Premix Phase C and add to batch. Add Phase D. Premix Phase E, add to batch and mix until uniform.

**Styling Gel with Protein**

<b>Phase A:</b>	<b>% Weight</b>
Water	85.80
Carbomer-940	1.00
Propylene Glycol	1.00
<b>Phase B:</b>	
Triethanolamine	1.00
<b>Phase C:</b>	
Polyquaternium-11	2.00
PVP/VA Copolymer	4.00
<b>Phase D:</b>	
Hydrolyzed Elastin	2.00
<b>Phase E:</b>	
Dimethicone Copolyol	0.50
PEG-75 Lanolin Oil	0.50
Polysorbate 80	1.00
Germaben II	1.00
Fragrance	0.10
FD&C Green #3	0.10

**Procedure:**

Add carbomer to water with high agitation. Mix until smooth. Add rest of Phase A. Add triethanolamine and mix until clear. Add Phase C slowly, mix thoroughly. Add Phase D, mixing until uniform. Add Phase E in order and mix until homogeneous.

**SOURCE: Sutton Laboratories: Suggested Formulations**

**Spray-on De-tangler**

<u>Ingredient:</u>		<u>Wt. %</u>
Deionized Water		91.60
Isostearylamidopropyl Dimonium		
Ethosulfate	M-Quat 522	0.30
Dimethicone Copolyol	Masil 1066C	0.60
Propylene Glycol		7.00
Benzoic Acid		0.15
Triethanolamine		0.20
Fragrance		0.15

pH: 5.0-5.5

Viscosity: Water-thin

Appearance: Clear, nearly water-white liquid

**Procedure:**

Blend the water, M-Quat 522, and Masil 1066C. Pre-mix the benzoic acid and propylene glycol; add to batch. Adjust the pH and add fragrance.

SOURCE: Mazer Chemicals: Formulation B-104

**Spray Detangler**

This product is sprayed onto the hair to make combing of wet or dry hair easier.

<u>Ingredients:</u>	<u>% w/w</u>
Water	87.3
Propylene Glycol	8.0
Cocamidopropyl Betaine (Tego Betaine L-7)	3.0
PEG-7 Glyceryl Cocoate (Tegosoft GC)	1.0
Dimethicone Copolyol (Abil B 8852)	0.7
Fragrance	Q.S.
Preservatives	Q.S.

**Procedure:**

Blend the ingredients in order, mixing between additions until the formula is clear.

SOURCE: Goldschmidt Chemical Corp.: Suggested Formulation

Two Phase Conditioner

A product which conditions and moisturizes the hair. Panthenol is an effective moisturizer, emollient and conditioner for hair. It gives hair a healthy shine. An especially good product to use after a curl relaxer to rebalance pH of the scalp and hair cuticle. It is substantive and reparative because of the Pationic ISL and dl-Panthenol.

Ingredients:

% W/W

## Part A:

1. Mineral Oil	21.000
2. Pationic ISL/85	4.000
3. Propylene Glycol	6.000
4. 2-Phenoxyethanol	1.500
5. Rita Guayazulene	0.006

## Part B:

6. Distilled Water	55.294
7. Methylparaben	0.200
8. dl-Panthenol	2.000

## Part C:

9. Electrolyte Solution	10.000
-------------------------	--------

Compounding Procedures:

Heat A and B to 72C. Combine. Mix. Add C when temperature is at 60C. Cool to Room Temperature. Maintain rapid agitation during filling.

Electrolyte Solution:

1. Distilled Water	7.00
2. Citric Acid	1.10
3. Magnesium Sulfate	1.50
5. Magnesium Carbonate	0.40

Formulation 107-119

Instant Conditioner

This conditioner leaves the hair soft and smooth. Ritawax ALA adds luster to the hair and Patlac LA brings hair into the right pH balance.

Ingredients:

% W/W

## Part A:

1. Distilled Water	+ -87.80
2. Stearalkonium Chloride	7.50
3. Ritapro 165	2.00
4. Cetyl Alcohol	2.00
5. Ritawax ALA	0.50

## Part B:

6. Patlac LA (44%)	QS
7. Perfume	QS

## Part C:

8. Sodium Chloride (25% Solution)	+ -0.20
-----------------------------------	---------

Heat Part A to 165F, mix. Cool to 120F with mixing. Add perfume. Cool to 95F. Adjust pH to 3.5 with Patlac LA. Adjust viscosity with Sodium Chloride (25% solution).

SOURCE: R.I.T.A. Corp.: Formulation 104-52/HB-89-1-16

# **Section VII**

## **Insect Repellents**

Gelled DEET

Protection against insects in a convenient non-greasy clear gel form, using 10% DEET.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. DEET	10.00
2. Alcohol - Ethyl Alcohol 190 Proof	40.00
Part B:	
3. Acritamer 940	0.50
Part C:	
Distilled Water	48.50
Part D:	
5. Triethanolamine (50%)	1.00

Compounding Procedures:

Combine Part A; add Part B and mix for 15 minutes. Slowly add C and mix for 45 minutes. Neutralize with D. (If product is aerated, allow to stand before adding D).

Viscosity: RVF Brookfield, Spindle #7 @ 20 rpm: 45,000 cps

Formulation 107-171

Gelled DEET

Protection against insects in a convenient non-greasy clear gel form, using 10% DEET.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. DEET	10.00
2. Alcohol - Ethyl Alcohol 190 Proof	40.00
3. Myristyl Lactate	0.50
Part B:	
4. Acritamer 940	0.50
Part C:	
5. Distilled Water	48.00
Part D:	
6. Triethanolamine (50%)	1.00

Compounding Procedure:

Combine Part A; add Part B and mix for 15 minutes. Slowly add Part C and mix for 45 minutes. Neutralize with part D. (If product is aerated allow to stand after adding D).

Viscosity: RVF Brookfield #7 @ 20 rpm: 42,000 cps.

Formulation 107-172

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Gelled DEET

Protection against insects in a convenient non-greasy clear gel form, using 10% DEET.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. DEET	10.00
2. Alcohol-Ethyl Alcohol 190 Proof	40.00
Part B:	
3. Acritamer 941	0.50
Part C:	
4. Distilled Water	48.50
Part D:	
5. Triethanolamine (50%)	1.00

**Compounding Procedures:**

Combine Part A; add Part B and mix for 15 minutes. Slowly add Part C and mix for 45 minutes. Neutralize with Part D. (If product is aerated allow to stand before adding D).

Viscosity: RVF Brookfield, Spindle #7 @ 20 rpm: 14,000 cps.

Formulation 107-173

Gelled DEET

Protection against insects in a convenient clear gel form, using 10% DEET.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. DEET	10.00
2. Alcohol - Ethyl Alcohol 190 Proof	40.00
Part B:	
3. Acritamer 940	0.25
4. Acritamer 941	0.25
Part C:	
5. Distilled Water	48.50
Part D:	
6. Triethanolamine (50%)	1.00

**Compounding Procedures:**

Combine Part A; add Part B and mix for 15 minutes. Slowly add Part C and mix for 45 minutes. Neutralize with Part D. (If product is aerated allow to stand before adding D.)

Viscosity: RVF Brookfield, Spindle #7 @ 20 rpm: 26,000 cps.

Formulation 107-175

**SOURCE: R.I.T.A. Corp.: Suggested Formulations**



Gelled DEET

Protection against insects in a convenient non-greasy clear gel form, using 7.5% DEET.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. DEET	7.50
2. Alcohol - Ethyl Alcohol 190 Proof	40.00
3. Myristyl Lactate	0.50
Part B:	
4. Acritamer 940	0.50
Part C:	
5. Distilled Water	50.50
Part D:	
6. Triethanolamine (50%)	1.00

**Compounding Procedures:**

Combine Part A; add Part B and mix for 15 minutes. Slowly add Part C and mix for 45 minutes. Neutralize with Part D.

(If product is aerated allow to stand before adding D.)

Viscosity: RVF Brookfield, Spindle #7 @ 20 rpm: 41,000 cps.

Formulation 107-207

Gelled Deet

Protection against insects in a convenient clear gel form, using 7.5% DEET.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. DEET	7.50
2. Alcohol - Ethyl Alcohol 190 Proof	40.00
3. Myristyl Lactate	0.50
Part B:	
4. Acritamer 940	0.60
Part C:	
5. Distilled Water (80-95C)	16.00
6. Methocel E4M	0.20
7. Distilled Water (very cold or ice)	34.00
Part D:	
8. Triethanolamine (50%)	1.20

**Compounding Procedures:**

Combine Part A; add Part B and mix for 15 minutes. Premix hot water and Methocel E4M until all particles are thoroughly wetted and a smooth paste is obtained, then add cold water or ice. Cool to 20C and mix for 20 minutes. Then slowly add C and mix for 45 minutes. Neutralize with Part D.

Viscosity: RVF Brookfield, Spindle #7 @ 20 rpm: 54,000 cps

Formulation 107-208

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Pyroicide and MGK Intermediates  
Intermediate Number 1995

<u>1. Composition:</u>	<u>% by wt</u>
N,N-diethyltoluamide (95% meta)	86.00
MGK 264	8.00
MGK Repellent 326	6.00
<u>2. Typical Inspections:</u>	
Sp. Gravity @ 20C: 1.012	
Color, Gardner: 4	
Refractive Index ND 25C: 1.5181	
Flash Point TOC: 200F	
<u>3. EPA Reg. No. 1021-: 1276</u>	
<u>4. Typical Formulae from Intermediate Use (% by wt):</u>	
% Intermediate:	25.00
% Isopropanol or Blend of Isopropanol and Propellant:	75.00
<u>5. Finished Product (% by wt):</u>	
N,N-diethyltoluamide (95% meta):	21.50
MGK 264	2.00
MGK Repellent 326	1.50
Inerts (Propellant and Solvents or Solvent Only)	75.00

Intermediate Number 2007

<u>1. Composition:</u>	<u>(% by wt)</u>
N,N-diethyltoluamide (95% meta):	76.92
MGK 264	8.00
MGK Repellent 326	7.70
<u>2. Typical Inspections:</u>	
Sp. Gravity @ 20C: 1.013	
Color, Gardner: 4	
Refractive Index ND 25C: 1.5166	
Flash Point TOC: 200F	
<u>3. EPA Reg. No. 1021-: 1290</u>	
<u>4. Typical Formulae from Intermediate Use (% by wt):</u>	
% Intermediate	32.50
% Isopropanol or Blend of Isopropanol and Propellant	67.50
<u>5. Finished Product (% by wt):</u>	
N,N-diethyltoluamide (95% meta)	25.00
MGK 264	5.00
MGK Repellent 326	2.50
Inerts (Propellant and Solvents or Solvent Only)	67.50

SOURCE: McLaughlin Gormley King Co.: Suggested Formulations

**Pyroicide and MGK Intermediates**  
**Intermediate Number 2020**

<b><u>1. Composition:</u></b>	<b><u>(% by wt)</u></b>
N,N-diethyltoluamide (95% meta)	80.00
MGK 264	12.00
MGK Repellent 326	8.00
<b><u>2. Typical Inspections:</u></b>	
Sp. Gravity @ 20C: 1.008	
Color, Gardner: 4	
Refractive Index ND 25C: 1.5170	
Flash Point TOC: 200F	
<b><u>3. EPA Reg. No. 1021-: 1312</u></b>	
<b><u>4. Typical Formulae from Intermediate Use (% by wt):</u></b>	
% Intermediate:	25.00
% Isopropanol or Blend of Isopropanol and Propellent:	75.00
<b><u>5. Finished Product (% by wt):</u></b>	
N,N-diethyltoluamide (95% meta):	20.00
MGK 264	3.00
MGK Repellent 326	2.00
Inerts (Propellent and Solvents or Solvent Only)	75.00

**Intermediate Number 5734**

<b><u>1. Composition:</u></b>	<b><u>(% by wt)</u></b>
N,N-diethyltoluamide (95% meta)	70.00
MGK 264	20.00
MGK Repellent 326	10.00
<b><u>2. Typical Inspections:</u></b>	
Sp. Gravity @ 20C: 1.018	
Color, Gardner: 4	
Refractive Index ND 25C: 1.5147	
Flash Point TOC: 200F	
<b><u>3. EPA Reg. No. 1021-: 567</u></b>	
<b><u>4. Typical Formulae from Intermediate Use (% by wt):</u></b>	
% Intermediate:	25.00
% Isopropanol or Blend of Isopropanol and Propellent:	75.00
<b><u>5. Finished Product: (% by wt.)</u></b>	
N,N-diethyltoluamide (95% meta)	17.50
MGK 264	5.00
MGK Repellent 326	2.50
Inerts (Propellent and Solvents or Solvent Only)	75.00

**SOURCE: McLaughlin Gormley King Co.: Suggested Formulations**

**Repellent Stick**

The following formula has produced a stick which is very cosmetically appealing and holds up well under storage. Formulators would be responsible for their own acute toxicology for registration purposes.

**Stick Formula**

DEET	14%
MGK 264	4%
MGK Repellent 326	2%
Isopropyl alcohol	55%
Glycerin	4%
*Beeswax	20%
Stearyl alcohol	1%

Blend all liquid ingredients together, heat to ca. 45C, then add solids. Agitate until all ingredients are dissolved.

Immediately pour into stick container and cool to room temperature.

Sticks of this type have held up chemically and physically after one year's storage at 100F.

\*Synthetic Beeswax Beads Waxenol 82/5B

**Repellent Roll-On**

The roll-on applicator is a convenient way to apply a repellent to exposed skin - particularly the arms. MGK has developed a formulation that is suitable for this mode of application, and is cosmetically acceptable.

MGK Intermediate 5734	20.00%
Isopropyl alcohol	51.00%
Deionized water	28.50%
Carbopol 940	0.25%
Ethomeen C-25	0.25%

The levels of Carbopol 940 and Ethomeen C-25 can be varied to change the viscosity of the formulation.

SOURCE: McLaughlin Gormley King Co.: Suggested Formulations

### Spray Pump Formulations

There has developed an interest in personal repellent formulations which can be dispensed by finger operated spray pumps. The spray pumps provide almost the same ease of application of a pressurized product but without propellents. In the MGK work, two basic types of pumps and containers were evaluated - crimp-on with aerosol can and screw-on with various synthetic containers. The purpose of the study was to determine long-time action of typical repellent solutions in containers and pumps.

#### A. Crimp-On Pump:

Units containing the repellent formulation outlined below were stored at 100F upright and inverted. Each three months the units were weighed and actuated.

#### Pump - Emson

Crimp-Type Pump Spray Dispenser  
1" Tin-Plate Mounting Cup  
Epon Top and Bottom

#### Actuator:

"Extractor-Mist" actuator  
1/2" diameter anadized  
insert, .017" orifice,  
.f180" depth.

Flowed-In Gasket  
Buna Diaphragm  
Delrin Stem

#### Container:

Peerless Tube  
Epon Lining

#### Formulations:

Formula 2007	32.50%	to give: 25.00% DEET (95% meta)
Isopar E	15.00%	5.00% MGK 264
Isopropyl alcohol	52.50%	2.50% MGK R-326

After one year storage, all units continued to function properly, the weight loss was negligible (all units did not leak) and there was no effect on the can or pump. Chrmical analysis showed the actives up-to-srength.

SOURCE: McLaughlin Gormley King Co.: Suggested Formulations

**Spray Pump Formulations (Continued)****B. Screw-On Pump:**

The liquids were stored at 100F in the various containers listed below. The pumps were stored separately and upside-down in a primed condition so that the solutions were in intimate contact with all parts of the pumps and dip tubes for the longest possible time between inspections. At each inspection (at three weeks, one month, six weeks, two months, six months, nine months and one year) the pumps were put onto the respective containers and tested for continued ability to spray satisfactorily.

**Containers:**

- 1) White, translucent, dense polyethylene from Monsanto Chemical Company.
- 2) White, opaque dense polyethylene from Contintal Can Company.
- 3) Green, translucent (almost clear) from high nitrile polymer Cyclopac from Borg Warner.

**Pumps:****Comments:**

- |   |   |
|---|---|
| 1) Ethyl/VCA (Bridgeport)<br>Type: LP11<br>Rubber: Neoprene<br>Finish: 22 mm<br>Size: .415 D.C.<br>Dip Tube: .060"<br>Actuator: LP11-26     | Good spray and good projection  |
| 2) Ethyl/VCA (Bridgeport)<br>Type: LP19<br>Rubber: Buna<br>Finish: 20 mm<br>Size: .410<br>Dip Tube: .060"<br>Actuator: L19-26 (std. insert) | Good spray and good projection  |
| 3) Ethyl/VCA (Bridgeport)<br>Type: LPS10<br>Piston: Std.<br>Finish: 28<br>Size: 400<br>Dip Tube: .160 I.D.<br>Actuator: L28-21 (W-4 insert) | Particle size larger than with others, but still okay. Projection of spray not as good as others. |
| 4) Risdon Pump Valve SL-200<br>#372-017-14<br>Piston: 959-037-14<br>Body: 959-031-17<br>Actuator: 979-101-04                                | Good spray and good projection  |

**Solutions:**

- |   |          |  |
|---|----------|--|
| A) 15% Int. 5734<br>15% Isopar E<br>70% Isopropanol       | to give: | 10.50% Deet (94% meta)<br>3.00% MGK 264<br>1.50% MGK R-326 |
| B) 32.5% int. 2007<br>15.0% Isopar E<br>52.5% Isopropanol | to give: | 25.00% DEET (95% meta)<br>5.00% MGK 264<br>2.50% MGK R-326 |

**SOURCE: McLaughlin Gormley King Co.: Suggested Formulations**

Specimen Label  
Pressurized Insect Repellent Spray for Personal Use from  
Pyrocide Intermediate 5734  
Front Panel

Repels Mosquitoes, Chiggers, Ticks, Deer Flies, Stable Flies, Black Flies, Gnats and Fleas on Exposed Skin Surfaces.

ACTIVE INGREDIENTS:

N,N-diethyl-m-toluamide	16.625%
Other isomers	0.875%

*N-Octyl bicycloheptene dicarboximide	5.000%
---------------------------------------	--------

**Di-n-propyl isocinchomeronate	2.500%
---------------------------------	--------

INERT INGREDIENTS:	75.000%
--------------------	---------

\*MGK 264, Insecticide Synergist

\*\*MGK Repellent 326

Pyrocide, MGK - Registered trademarks of McLaughlin Gormley King Co.

Specimen Label  
Pressurized Insect Repellent Spray for Personal Use from  
MGK Intermediate 2007  
Front Panel

Repels Mosquitoes, Chiggers, Ticks, Deer Flies, Stable Flies, Black Flies, Gnats and Fleas on Exposed Skin Surfaces.

ACTIVE INGREDIENTS:

N, N-diethyl-m-toluamide	23.75%
--------------------------	--------

Other isomers	1.25%
---------------	-------

*N-Octyl bicycloheptene dicarboximide	5.00%
---------------------------------------	-------

**Di-n-propyl isocinchomeronate	67.50%
---------------------------------	--------

INERT INGREDIENTS:

\*MGK 264, Insecticide Synergist

\*\*MGK Repellent 326

MGK - Registered trademark of McLaughlin Gormley King Co.

Specimen Label  
Liquid Insect Repellent for Personal Use from Pyrocide  
Intermediate 5734  
Front Panel

Repels Mosquitoes, Chiggers, Ticks, Deer Flies, Stable Flies, Black Flies, Gnats and Fleas on Exposed Skin Surfaces.

ACTIVE INGREDIENTS:

N,N-diethyl-m-toluamide	16.625%
-------------------------	---------

Other isomers	0.875%
---------------	--------

*N-Octyl bicycloheptene dicarboximide	5.000%
---------------------------------------	--------

**Di-n-propyl isocinchomeronate	2.500%
---------------------------------	--------

INERT INGREDIENTS	75.000%
-------------------	---------

\*MGK 264, Insecticide Synergist

\*\*MGK Repellent 326

Pyrocide, MGK - Registered trademarks of McLaughlin Gormley King Co.

SOURCE: McLaughlin Gormley King Co.: Suggested Formulations

SPECIMEN LABELSaturated Paper Towel Personal Repellent from Pyrocide  
Intermediate 5734  
Front Panel

Repels Mosquitoes, Chiggers, Ticks, Deer Flies, Stable Flies,  
Black Flies, Gnats and Flies on Exposed Skin Surfaces.

## ACTIVE INGREDIENTS:

N,N-diethyl-m-toluamide	11.71%
Other isomers	0.62%

*M-Octyl bicycloheptene dicarboximide	3.52%
---------------------------------------	-------

**Di-n-propyl isocinchomeronate	1.96%
---------------------------------	-------

INERT INGREDIENTS:	82.19%
--------------------	--------

*MGK 264, Insecticide Synergist	
---------------------------------	--

**MGK Repellent 326	
---------------------	--

Pyrocide, MGK - Registered trademark of McLaughlin Gormley  
King Co.

SPECIMEN LABELInsect Repellent Gel from Pyrocide Intermediate 5734  
Front Panel

Repels Mosquitoes, Chiggers, Ticks, Deer Flies, Stable Flies,  
Black Flies, Gnats and Fleas on Exposed Skin Surfaces.

## ACTIVE INGREDIENTS:

N,N-diethyl-m-toluamide	6.65%
Other isomers	0.35%

*N-Octyl bicycloheptene dicarboximide	2.00%
---------------------------------------	-------

**Di-n-propyl Isocinchomeronate	1.00%
---------------------------------	-------

INERT INGREDIENTS:	90.00%
--------------------	--------

*MGK 264, Insecticide Synergist	
---------------------------------	--

**MGK Repellent 326	
---------------------	--

Pyrocide, MGK - Registered trademarks of McLaughlin Gormley  
King Co.

SPECIMEN LABELInsect Repellent Stick from Pyrocide Intermediate 5734  
Front Panel

Repels Mosquitos, Chiggers, Ticks, Deer Flies, Stable Flies,  
Black Flies, Gnats and Fleas on Exposed Skin Surfaces.

## ACTIVE INGREDIENTS:

N,N-diethyl-m-toluamide	13.30%
Other isomers	0.70%

*N-Octyl bicycloheptene dicarboximide	4.00%
---------------------------------------	-------

**Di-n-propyl isocinchomeronate	2.00%
---------------------------------	-------

INERT INGREDIENTS:	80.00%
--------------------	--------

*MGK 264, Insecticide Synergist	
---------------------------------	--

**MGK Repellent 326	
---------------------	--

Pyrocide, MGK - Registered trademarks of McLaughlin Gormley  
King Co.

SOURCE: McLaughlin Gormley King Co.: Suggested Formulations



SPECIMEN LABEL  
Insect Repellent Cream from Pyroicide Intermediate 5734  
Front Panel

Repels Mosquitoes, Chiggers, Ticks, Deer Flies, Stable Flies, Black Flies, Gnats and Fleas on Exposed Skin Surfaces.

ACTIVE INGREDIENTS:

N,N-diethyl-m-toluamide	16.625%
Other isomers	0.875%

*N-Octyl bicycloheptene dicarboximide	5.000%
---------------------------------------	--------

**Di-n-propyl isocinchomeronate	2.500%
---------------------------------	--------

INERT INGREDIENTS:	75.000%
--------------------	---------

\*MGK 264, Insecticide Synergist

\*\*MGK Repellent 326

Pyroicide, MGK - Registered trademarks of McLaughlin Gormley King Co.

Pyroicide and MGK Intermediate

Intermediate Number: 6339

1. Composition: (% by wt)

N,N-diethyltoluamide (95% meta)	88.89
---------------------------------	-------

MGK 264	11.11
---------	-------

MGK Repellent 326	-----
-------------------	-------

2. Typical Inspections:

Sp. Gravity @ 20C: 0.990

Color, Gardner: 4

Refractive Index ND 25C: 1.5182

Flash Point TOC: 200F

3. EPA Reg. No. 1021-: 7374. Typical Formulae from Intermediate Use (% by wt):

% Intermediate	12.00
----------------	-------

% Isopropanol or Blend of Isopropanol and Repellent:	88.00
--	-------

5. Finished Product (% by wt):

N, N-diethyltoluamide (95% meta)	10.67
----------------------------------	-------

MGK 264	1.33
---------	------

Inerts (Propellant and Solvents or Solvent Only)	88.00
--	-------

SOURCE: McLaughlin Gormley King Co.: Suggested Formulations

General Formulation Information for Pressurized Spray

The variety of repellent mixtures offered by MGK enables the marketer of pressurized products to take advantage of this method of product use. For example, Intermediate 5734 might be filled as follows:

## Formula 1:

MGK Intermediate 5734	15%
Isopar E	30%
Isopropanol	51%
Nitrous Oxide or Carbon Dioxide	4%

This formula should be used with a valve such as Precision NN with:

0.016" MBRT Button  
0.013" Stem  
0.080" Pressure Fill Body

The end product has a "soft" fine particle spray with little bounce-off.

A hydrocarbon propellant system can also be used to fill Intermediate 5734.

Formula 2

Intermediate 5734	10-25%
**Solvent	70-55%
A-46 Isobutane/Propane	20%

\*\* All Isopropanol, all Isopar E, or blend of the two.

The selection of valves seems to be critical with this formulation. MGK has found two valves that gives suitable sprays:

.016" MBRT button	.016" MBRT button
.013" stem	.013" stem
.040" body	.080" body
regular dip tube	regular dip tube

Neoprene stem gasket proved satisfactory at 100F storage for one year. MGK expects Buna N to be okay also.

This pressurized fill, like all personal repellent pressurized fills, is flammable and must be labeled accordingly.

SOURCE: McLaughlin Gormley King Co.: Suggested Formulations

# **Section VIII**

## **Lotions**

**Aloe Lotion**

A viscous lotion with aloe and emollients.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	35.50
2. Glycerin	4.00
3. Acritamer 940	0.50
4. Ritaloe 1X	50.00
5. Ritachol	5.00
6. Patlac IL	1.00
7. PEG 20 Stearate	3.00
8. Triethanolamine (50%)	1.00
9. Color, Fragrance, Preservative	QS

**Compounding Procedure:**

Disperse item 3 into item 1. Add item 2. Mix well and heat to 70C. Combine items 5,6 and 7 and heat to 70C. Combine both phases, mix well. Add item 8, cool with mixing to 45C. Add remaining ingredients. Cool to 35C; package.

Formulation HB-89-R-17

**Keri-Type Lotion**

A Keri-type lotion formulation with emollients, softeners and humectants.

<u>Ingredients:</u>	<u>% W/W</u>
<b>Part A:</b>	
1. Ritalan C	2.00
2. Ritachol	5.00
3. Mineral Oil, 70/80	18.00
4. Cetyl Alcohol	2.00
5. Supersat AWS 4	2.00
6. Propylparaben	0.05
<b>Part B:</b>	
7. Glycerin	1.00
8. Methylparaben	0.10
9. Distilled Water	69.85

**Compounding Procedures:**

Combine Part A and heat to 65-70C with agitation. Combine Part B and heat to 75C with agitation. When both phases are at temperature, and uniform, add Part A to Part B with continued agitation. Cool to 35C. Package.

Formulation HB-89-R-16

**SOURCE: R.I.T.A. Corp.: Suggested Formulations**

All Purpose Skin Lotion

<u>Ingredients:</u>	<u>% by Weight</u>
Part A: Mineral oil, light	4.00
Kessco Isopropyl Myristate	4.00
Polowax	3.50
Propyl Paraben	0.15
Part B: Glycerine	3.00
Carbomer 941	0.20
Methyl Paraben	0.15
Triethanolamine	0.20
Fragrance, dye	Q.S.
D.I. Water	Q.S. to 100

Mixing Procedure:

Disperse Carbomer 941 in water and heat to 65C. After completely dispersed, add glycerine, methylparaben and triethanolamine. Mix until homogeneous. Heat Part A to 65C and add to Part B w/rapid mixing. Continue to heat and mix for thirty minutes. Cool to room temperature and add fragrance and dye if desired.

Typical Properties:

Creamy thick white emulsion  
 Viscosity @ 25C: 20,000 cps  
 pH (as is): 7  
 Passed freeze thaw and elevated temperature study  
 Formulation No. 444

Lotion for Normal-Oily Skin

<u>Ingredients:</u>	<u>% by Weight</u>
Kessco Octyl Isonanoate	5.00
Glycerin	3.00
Stearic acid, tech.	3.00
Triethanolamine 88%	1.80
Wecobee S	0.50
Kessco Cetyl Alcohol	0.50
DMDM hydantoin	0.25
Carbopol 934	0.15
Methyl paraben	0.15
Dow Corning 200 fluid (200cST)	0.10
Propyl paraben	0.10
Tetrasodium EDTA	0.10
D.I. water	Q.S. to 100

Mixing Procedure:

Add D.I. Water to a suitable mixing vessel and begin agitation. Add Carbopol 934 with good agitation and mix at high speed until a solution free of lumps is obtained. Add Silicone DC-200 and mix until completely dissolved. Add Glycerin, DMDM Hydantoin, and Methyl Paraben. Heat to 165-170F. Prepare the oil phase by adding together Kessco Octyl Isonanoate, Wecobee S, Kessco 653, Kessco Cetyl Alcohol, Stearic Acid, and Propyl Paraben. Heat to 170-175F. Add the oil phase to the water phase with good agitation and mix for 30 minutes. Start cooling to 90F. At 110F add Tetrasodium EDTA and Triethanolamine. Stop cooling and agitation at 90F.

SOURCE: Stepan Co.: Formulation No. 589

**Body Lotion**

<u>Phase A:</u>	<u>% Weight</u>
Glyceryl Stearate (Cerasynt GMS)	3.00
PEG-20 Stearate (Cerasynt 840)	2.00
C12-15 Alcohols Lactate (Ceraphyl 41)	2.00
Methylparaben	0.25
Propylparaben	0.25
Hexylene Glycol	2.20
Cetyl Alcohol	0.70
<u>Phase B:</u>	
Water	83.10
Carbomer-934 (Carbopol 934)	0.10
<u>Phase C:</u>	
Water	3.00
Triethanolamine, 99%	0.10
<u>Phase D:</u>	
Water	3.00
Germall 115	0.30

**Procedure:**

Heat Phase A to 85C. Stir well. Disperse Carbopol-934 in water while heating to 85C. Mix until uniform. Add Phase C to Phase B. Mix well with a sweep blade. Add Phase A to batch At 85C. Homogenize while cooling to 75C. Homogenize until uniform. Cool to 45C. while stirring with a sweep blade and add Phase D.

**Behenyl Hand Lotion**

	<u>% Weight</u>
Behenamidopropyl Dimethylamine (Incromine BB)	3.00
Behenic Acid (Crodacid B)	2.50
PPG-2 Myristyl Ether Propionate (Crodamol PMP)	20.00
Dimethicone, 200 cps. (Dow Corning 200 Fluid)	3.00
Germaben II	1.00
Water	68.50
Fragrance	2.00

**Procedure:**

Combine the first 4 ingredients and heat to 85-90C. Heat water to 85-90C and add to oils with good mixing. Cool to 40C and add Germaben II and fragrance. Continue mixing and cool to 30C.

**SOURCE:** Sutton Laboratories: Suggested Formulations

**Body Massage Lotion**

A low solids cream with emollients and humectants. dl-Panthenol helps dry skin, promotes healing and moisturizes.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Mineral Oil, 200/210	0.90
2. Dimethicone, 350 CST	1.20
3. Stearic Acid XXX	3.60
4. Rita CA	1.30
5. Ritalan	0.40
6. Ritachol	0.40
7. Propylparaben	0.30
8. Pationic ISL	0.20
Part B:	
9. Glycerin	1.50
10. Distilled Water	87.48
11. Ritapan DL	0.20
12. Triethanolamine (50%)	1.80
13. Methylparaben	0.70
Part C:	
14. Ritaloe 200M	0.02

**Compounding Procedure:**

Combine ingredients in Part A and heat to 180F. Combine ingredients in Part B and heat to 180F. Add Part A to Part B and stir until emulsion is uniform. Cool to 140F. Add remaining ingredient (Phase C).

Formulation HB-89-PA-14

**Temporary Anti-Wrinkle Lotion**

This product contains a wrinkle remover (temporary), Bovinal 30. The smoothing effect on the skin is due to the Ritachol, Ritawax ALA, Ritalan C, and the Pationic ISL. The stabilizer, Acritamer 941, and the Pationic ISL are the primary emulsifiers.

<u>Ingredients:</u>	<u>% W/W</u>
1. Ritachol	2.50
2. Ritawax ALA	1.00
3. Glyceryl Stearate	1.00
4. Stearic Acid	2.00
5. Ritalan C	5.00
6. Pationic ISL	1.25
7. Acritamer 941	0.20
8. Distilled Water	+75.55
9. Propylene Glycol	4.50
10. Triethanolamine (50%)	1.00
11. Bovinal 30	6.00
12. Color, Fragrance, Preservatives	QS

**Compounding Procedure:**

Disperse item 7 into item 8 and add item 9. Heat to 70C. Combine items 1-6 and heat to 70C. Combine both phases, mix well and add item 10. Cool with mixing to 40C before adding remaining ingredients. Cool to 35C. Fill.

Formulation HB-89-L-26

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Cationic Conditioning Lotion

<u>Ingredients:</u>	<u>% by weight</u>
Part A:	
Deionized Water	90.85
Glycerin	2.00
AMP-95	0.25
Distearyltrimmonium Chloride	0.10
Part B:	
Isopropyl Palmitate	2.50
White Petrolatum	1.00
Octyl Hydroxystearate	1.00
Glycol Stearate	1.00
Pemulen TR-1	0.40
Part C:	
Propylene Glycol (and) Diazolidinyl Urea (and) Methyl- paraben (and) Propylparaben	0.90

Procedure:

Combine A ingredients in a vessel which will contain the entire formulation. With mixing, heat to 60C. In a separate vessel, combine all B ingredients except Pemulen. Heat to 60C. When all B ingredients have melted, reconfirm temperature and add Pemulen. Use agitation to break up any soft agglomerates of resin. With vigorous agitation, add B to A. Continue mixing to produce a smooth emulsion. At 45-50C, add C. Continue mixing. Fill containers @ 35C.

Formulation PF-0227 suggested by B.F. Goodrich

Hand and Body Lotion

<u>Ingredients:</u>	<u>% by weight</u>
A Stearic acid xxx	2.00
Glyceryl mono/distearate (Myvacet 9-40)	1.00
Cetyl alcohol (Crodacol C-70)	1.00
White Petrolatum USP (Penreco Snow)	2.50
White Mineral Oil (Drakeol 9)	4.00
Dimethicone (Silicone SF 96-200)	0.40
Oxaban-A	0.10
B Water	73.00
Glycerin	5.00
AMP	0.90
C Carbomer 2984	0.20
Disodium EDTA	0.10
Water	9.80

Procedure:

1. Dissolve EDTA into the water of Section C. With vigorous agitation, gently sprinkle Carbomer 2984 into the EDTA solution.
2. In a separate mixing vessel, combine all of the ingredients in Section B and heat to 80C.
3. Combine the ingredients in Section A, heat to 80C and mix.
4. Add A to B with vigorous agitation. Mix for a further 20 minutes.
5. Add C.
6. Cool rapidly

SOURCE: Amcol Chemical Co.: Formula PF-0186



Cleansing Lotion

A	Water	35.0%
	Jordapon CI Flake	18.0
	Preservative, EDTA	0.4
B	Mineral Oil (1)	7.0
	Cetyl Alcohol (2)	2.0
C	Water	36.2
	Hydroxypropyl Methylcellulose (3)	0.5
	Triethanolamine	0.6
D	Fragrance	0.3
	(1) Drakeol 7, Penreco	
	(2) CO-1695, Proctor and Gamble	
	(3) Methocel 40-100, Dow Chemical	

**Procedure:**

In the main vessel, heat the part A ingredients to 55C with stirring. Premix part B, heat to 55C, and add to the batch with high shear mixing. In a separate vessel, disperse the Methocel in the part C water. Add approximately 0.06% of triethanolamine to initiate hydration. When hydration is complete, add this phase to the batch, cooling to 35-40C. Add fragrance, and adjust pH to 6.0-6.5 with remaining triethanolamine.

Formula 7003-41

Cleansing Lotion

A	Jordapon CI Dispersion	25.0%
	Water	56.8
	POE 20 Sorbitan Monostearate (1)	2.0
	Xanthan Gum (2)	0.4
	Preservative, EDTA	0.4
B	Cocamide MEA (3)	3.0
	Ceteareth-20 (4)	3.0
	Cetyl Alcohol (5)	2.0
	Ethylene Glycol Monostearate (6)	2.0
	Isopropyl Palmitate (7)	2.0
	Poloxamer 338 (8)	2.0
	PEG-7 Glyceryl Cocoate (9)	1.0
C	Fragrance	0.4
	(1) T-Maz 60, PPG/Mazer	
	(2) Kelzan, Kelco	
	(3) Mazamide CMEA, PPG/Mazer	
	(4) Macol CSA-20, PPG/Mazer	
	(5) CO-1695, Proctor and Gamble	
	(6) Mapeg EGMS, PPG/Mazer	
	(7) Propal, Amerchol	
	(8) Macol 108, PPG/Mazer	
	(9) Mazol 159, PPG/Mazer	

**Procedure:**

Blend the ingredients in part A, heating to 65C. Premix part B, heating to 65C. Add B to A with good mixing, cool with gentle mixing to 35C, add fragrance.

pH is 6.5-7.0, viscosity 31,000 (TD@3rpm).

SOURCE: PPG Industries, Inc.: Formula 7003-43

Cleansing Lotion

<u>Part:</u>	<u>Ingredient:</u>	<u>Wt. %</u>
A	Deionized Water	56.8
	Xanthan Gum	Kelzan 0.4
	Sodium Cocoyl Isethionate	Jordapon CI Dispersion 25.0
	Preservative, EDTA	0.4
B	Cocamide MEA	Mazamide CMEA 3.0
	POE 20 Sorbitan Monostearate	T-Maz 60 2.0
	Ceteareth-20	Macol CSA-20 3.0
	Cetyl Alcohol	CO-1695 2.0
	Ethylene Glycol Monostearate	Mapeg EGMS 2.0
	Isopropyl Palmitate	Lexol IPP 2.0
	Poloxamer 338	Macol 108 2.0
C	PEG 7 Glyceryl Cocoate	Mazol 159 1.0
	Fragrance	0.4

pH: 6.5-7.0

Viscosity: 31,600 cps

Appearance: Glossy white lotion

Procedure:

Dissolve xanthan gum in water; heat to 65C (150F). Add Jordapon CI dispersion, preservative, and EDTA. Pre-mix Part B and heat to 65C (150F). Add B to A with good mixing; then cool to 45C (110F). Add fragrance and adjust pH, if necessary.

Formula K-101

Cleansing Lotion

<u>Part:</u>	<u>Ingredient:</u>	<u>Wt. %</u>
A	Deionized Water	71.7
	Hydroxypropyl Methylcellulose	Methocel 40-100 0.5
	Triethanolamine	0.1
B	Sodium Cocoyl Isethionate (and)	18.0
	Stearic Acid	Jordapon CI Flake 0.4
C	Preservative, EDTA	0.4
	Mineral Oil	Drakeol 9 7.0
D	Cetyl Alcohol	CO-1695 2.0
	Fragrance	0.3

pH: 6.5-7.0

Viscosity: 18,000 cps

Appearance: Smooth pearlescent lotion

Procedure:

Disperse the hydroxypropyl methylcellulose in water. With mixing, add the triethanolamine to initiate hydration. Begin heating to 65C (150F). Add Part B ingredients. Pre-mix Part C; heat to 65C (150F). Add Part C to the batch with good mixing. Cool to 45 C (110F): add fragrance and adjust pH, if necessary.

Formula K-102

SOURCE: PPG Industries, Inc.: Suggested Formulations

Cold Mix - W/O Emulsion Dihydroxyacetone LotionIngredients:

% w/w

## Phase A:

Polyglyceryl-4 Isostearate (and) Cetyl Dimethicone

Copolyol (and) Hexyl Laurate (Abil WE-09)

5.0

Mineral Oil

6.0

Isopropyl Myristate (Tegosoft M)

6.0

Caprylic/Capric Triglycerides (Tegosoft CT)

4.0

Petrolatum

3.0

Octyl Stearate (Tegosoft OS)

3.0

Stearyl Dimethicone (Abil Wax 9800)

3.0

## Phase B:

Sorbitol (70%)

3.0

Glycerin

2.0

Sodium Chloride

2.0

Water

58.0

Dihydroxyacetone

5.0

Procedure:

1. Blend Phase A.

2. Mix Phase B.

3. With slow lightning mix - slowly stream B into A. A milky dispersion will form.

4. Homogenize.

Skin Softening Lotion

(W/O Emulsion - Cold Process)

Ingredients:

% w/w

## Phase A:

Cetyl Dimethicone Copolyol (Abil EM-90)

2.0

Polyglyceryl-4 Isostearate (Isolan GI-34)

0.5

Mineral Oil

8.5

Octyl Stearate (Tegosoft OS)

5.0

Cetearyl Octanoate (Tegosoft Liquid)

7.0

Cetyl Dimethicone (Abil Wax 9814)

1.0

## Phase B:

Water

Q.S.

Polyquaternium-16

5.0-10.0

Preservatives

Q.S.

## Phase C:

Fragrance

Q.S.

Procedure:

1. Combine the ingredients of Phase A.

2. Combine the ingredients of Phase B.

3. Add B to A slowly with a low energy mixer. Maintain a smooth milky appearance at all times.

4. Add fragrance. Homogenize.

SOURCE: Goldschmidt Chemical Corp.: Suggested Formulations

Hand and Body Lotion

This oil/water emulsion applies easily and is absorbed into the skin quickly. It does not leave any residual greasiness or oiliness on the skin and leaves the skin soft and smooth to the touch.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	80.40
2. Acritamer 934	0.10
3. Glycerin	4.00
4. Tetra Sodium EDTA	0.05
5. Methylparaben	0.20
6. Glyceryl Stearate	3.20
7. Stearic Acid	3.00
8. Ritachol	3.00
9. Cetyl Alcohol	1.40
10. Ritachol 1000	0.60
11. Ritaderm	2.00
12. Isopropyl Palmitate	0.50
13. Propylparaben	0.10
14. Triethanolamine (50%)	1.20
15. Imidazolidinyl Urea	0.25
16. Fragrance	QS
17. Color	QS

Compounding Procedure:

Weigh and add item 1 into a container and begin stirring. Stir by means of a variable speed agitator equipped with a stirrer capable of imparting relatively high shearing stress (propeller type). Sprinkle in item 2 and stir until the resultant dispersion is smooth and free of lumps. Weigh items 3, 4 and 5 into the container and begin heating, while stirring continuously. Heat to 70-73C. Into another container add items 6 through 13 and begin heating and stirring. Heat this blend to 70-73C. When the water-containing blend is at 70-73C, add item 14. After neutralization of the Acritamer 934 has occurred, add the water-containing blend, while maintaining temperature, to the blend of items 6 through 13, which should be at 70-73C. While all the water-containing blend has been added, begin cooling the batch, while stirring continuously to ensure adequate emulsification. Cool to 55-60C and add the Urea. Cool to 40-43C and add remaining ingredients. Cool the batch to 25-30C and package.

SOURCE: R.I.T.A. Corp.: Formulation H-89-A-7

Hand and Body Lotion

This is an oil/water emulsion providing a creamy textured lotion which is adsorbed by the skin quickly and does not deposit residual greasiness or oiliness. Ritaderm has been included for its natural moisturizing factor-related qualities, as well as lanolin-like attributes. Ritaderm, as an emollient and lubricating agent, heightens the user's awareness of skin softness and smoothness imparted by this product.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	72.37
2. Acritamer 941	0.05
3. Propylene Glycol	5.00
4. Methylparaben	0.10
5. Triethanolamine (50%)	1.48
6. Stearic Acid	2.60
7. Mineral Oil	8.00
8. Ritaderm	2.75
9. Lanolin	1.00
10. Propylparaben	0.10
11. Ritachol	4.00
12. Glyceryl Stearate	2.00
13. Cetyl Alcohol	0.30
14. Fragrance	QS
15. Color	QS
16. Imidazolidinyl Urea	0.25

Compounding Procedure:

Weigh and add item 1 into the container and commence stirring. An agitator equipped with a stirrer capable of imparting relatively high shearing stress is recommended. (A variable speed agitator equipped with a propeller-type stirrer is suitable.) Add item 2 and stir until the Acritamer 941 is completely dispersed and no lumps can be seen or felt. Weigh items 3, 4 and 5, begin heating the blend. Heat to 70-73C, while stirring continuously. In another container, weigh and add all other ingredients with the exception of the fragrance and urea. Heat this blend, while stirring continuously to 70-73C. When both blends are at 70-73C add the water-containing blend to the Ritaderm-containing blend. When all the water-containing blend has been added, begin cooling the batch. Cool to 40-43C and add the remaining ingredients. Cool to 30-33C and package fill into suitable containers.

SOURCE: R.I.T.A. Corp.: Formulation H-89-A-8

High Humectant Lotion

<u>Part:</u>	<u>Ingredient:</u>	<u>Wt. %</u>
A	Deionized Water	73.49
	Sorbitol, 70%	Sorbitol Solution 12.00
	Nonoxynol-9	Macol NP-95 0.01
	Carbomer 934	Carbopol 934 0.40
B	Xanthan Gum	Kelzan 0.40
D	SD Alcohol 40B	5.70
	Stearamine Oxide	Mazox SDA 0.80
	Mercoxapol 171	Macol 18 1.50
	PEG-7 Glyceryl Cocoate	Mazol 159 0.60
	Methyl Paraben	Methyl Parasept 0.15
	Imidazolidinyl Urea	Germall 115 0.15
E	NaOH, 10% Solution	4.80

pH: 6.0-6.5

Viscosity: 150,000 cps (0.3 rpm)  
43,000 cps (3.0 rpm)

Appearance: Translucent gel

Procedure:

Blend Part A ingredients; sift Part B into a vortex. When uniform, sprinkle in Part C. Pre-mix Part D ingredients; add to batch. Adjust pH with Part E.

SOURCE: PPG Industries, Inc.; Formula I-103

Fragrance Lotion

<u>Ingredients:</u>	<u>% by weight</u>
A Deionized water	88.50
Glycerin	4.00
Dimethicone Copolyol	0.30
Disodium EDTA	0.10
B C12-15 Alcohols Benzoate	3.00
Fragrance, Noville #24093	2.00
Oleth-10	0.20
Pemulen TR-1	0.25
Carbopol 981	0.35
C AMP-95	0.50
D Propylene Glycol (and) Diazolidinyl Urea (and) Methyl-paraben (and) Propylparaben	0.80

Procedure:

1. Blend Part A ingredients in a vessel which will contain the entire formulation.
2. Blend Part B ingredients in a separate vessel. Pemulen and Carbopol should be slurried in this phase. Disrupt any soft lumps of these resins.
3. With moderate agitation, add Part B to Part A. Mix for 15-20 minutes. Add Part C and mix vigorously to produce a glossy, white product.
4. Mix Part D into emulsion.

SOURCE: Angus Chemical Co.; Formula PF-0233 suggested by B.F. Goodrich

Lotion

This is a rich, soothing lotion with a special conditioner that moisturizes and protects the skin. It combines the effectiveness of a cream with the lightness of a lotion. Lexquat AMG-IS is the primary cationic emulsifier with the added benefit of emolliency.

<u>Phase A:</u>	<u>% (w/w)</u>
Deionized Water	58.10
Cellosize QP-15,000H	0.60
Glycerine	3.00
Propylene Glycol	2.00
Lexgard M	0.20
Lexquat AMG-IS	12.00
<u>Phase B:</u>	
Lexol PG-865	15.00
Lexemul 55G	4.50
Myristyl Myristate	1.00
Stearyl Alcohol	2.00
Cetyl Alcohol	1.50
Lexgard P	0.10
<u>Phase C:</u>	
Fragrance	q.s.
<u>Procedure:</u>	

Charge batch vessel with water (Phase A). Begin mixing and heating to 78C+-2C. Dust in Cellosize. When completely hydrated, add remaining material of Phase A to batch. Combine Phase B in a separate vessel and heat to 78C+-2C. When uniform slowly add Phase B to Phase A maintaining mixing and temperature. Allow to mix at 78C for 15 minutes. Cool. At 40C, add Phase C to batch. Cool to room temperature.

Observations:

pH (direct): 4.9

Viscosity: 33,000 cps

SOURCE: Inolex Chemical Co.: Formulation SK-105

Body Lotion

<u>Ingredients:</u>	<u>% by weight</u>
A. Silicone Oil	7.5
Paraffin, thick liquid	7.5
Perfume oil	q.s.
Pemulen TR-1	0.4
B. Tris Amino	0.8
Water, distilled	to 100.0

Procedure:

Part A: Combine silicone oil and paraffin. Add Pemulen TR-1 and mix to disperse. Add perfume oil.

Part B: Dissolve Tris Amino in water.

Part C: Add A to B with vigorous agitation to emulsify.

SOURCE: Angus Chemical Co.: Formula PF-0194E

Lotion

Low solids o/w emulsion.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	+83.50
2. Glycerin	4.00
3. Acritamer 940	0.50
4. Simchin WS	2.00
5. Ritachol	5.00
6. Patlac IL	1.00
7. PEG 20 Stearate	3.00
9. Triethanolamine (50%)	1.00
10. Color, fragrance and preservatives	QS

Compounding Procedure:

Disperse item 3 in water with good mixing. Add glycerin. Begin heating water phase to 165F. Combine items 4,5,6 and 7 and begin heating to 165F. Add oil phase to water phase with agitation. Add Triethanolamine. Continue mixing without aeration. Cool to 120F. Add color, perfume and preservatives. Cool to 95F.

Formulation H-89-S-5

Hand Lotion

A light hand lotion suitable as a hand and body lotion.

<u>Ingredients:</u>	<u>% W/W</u>
1. Ritachol 2000	3.50
2. Pationic SSL	1.40
3. Isopropyl Palmitate	1.30
4. Distilled Water	88.80
5. Propylene Glycol	5.00
6. Color, Fragrance and Preservatives	QS

Compounding Procedure:

Combine items 1-3 and heat to 72C. Combine items 4 and 5 and heat to 72C. Combine both phases and mix well. Cool with mixing to 45C and add remaining ingredients. Cool to 35C. Package.

Formulation HB-89-R-40

SOURCE: R.I.T.A. Corp.: Suggested Formulations



Lotion

This is a rich, soothing lotion with a special conditioner that moisturizes and protects the skin. It combines the effectiveness of a cream with the lightness of a lotion. Lexquat AMG-IS is the primary cationic emulsifier with the added benefit of emolliency.

Phase A:	% (w/w)
Deionized Water	58.10
Cellosize QP-15,000H	0.60
Glycerine	3.00
Propylene Glycol	2.00
Lexgard M	0.20
Lexquat AMG-IS	12.00
Phase B:	
Lexol PG-865	15.00
Lexemul 55G	4.50
Myristyl Myristate	1.00
Stearyl Alcohol	2.00
Cetyl Alcohol	1.50
Lexgard P	0.10
Phase C:	
Fragrance	q.s.

Procedure:

Charge batch vessel with water (Phase A). Begin mixing and heating to 78+-2C. Dust in Cellosize. When completely hydrated, add remaining material of Phase A to batch. Combine Phase B in a separate vessel and heat to 78C+-2C. When uniform slowly add Phase B to Phase A maintaining mixing and temperature. Allow to mix at 78C for 15 minutes. Cool. At 40C, add Phase C to batch. Cool to room temperature.

Observations:

pH (direct): 4.9

Viscosity: 33,000 cps

SOURCE: Inolex Chemical Co.: Formula SK-105

Hand and Body Lotion

A superior product designed for after-bath use on traditionally dry areas such as hands, elbows and heels. Phospholipid EFA is strongly substantive towards skin providing non-greasy moisturizing and a pleasant after feel.

Part A:	%
Phospholipid EFA	4.00
Water	83.00
Part B:	
Steareth-2	2.00
Light Mineral Oil	4.00
Cetearyl Alcohol	3.00
Octyldodecyl Myristate	2.50
Dimethicone (100 cS)	1.50

Combine ingredients in both phases separately and heat to 65C. Homogenize (B) into (A) with continued heating until sufficiently mixed. Stir-cool to 45C. Add fragrance, color, and preservative as needed and fill.

SOURCE: Mona Industries, Inc.: Phospholipid EFA: Formula

**Low Solids Anionic Lotion**

A low solids, non-oily, moisturizing lotion.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Distilled Water	84.72
2. Propylene Glycol	5.00
3. Rita CA	3.00
4. Pationic ISL	2.00
5. Tauranol 1-78-6	1.25
6. Patlac NAL	1.00
7. Glycerin	1.00
8. Patlac IL	1.00
9. Ritapro 165	0.45
10. Methylparaben	0.15
11. Propylparaben	0.05
Part B:	
12. Germall II	0.20
13. Perfume	+0.10
14. Color (FD&C yellow #5)	+0.03
15. Patlac LA (44%)	+0.10

**Compounding Procedure:**

Heat Part A to 165F with agitation. Maintain 165F for 10 minutes. Cool with agitation to 120F. Add B with agitation. Cool to 95F. Adjust pH to 5.0+0.2 with Patlac LA.

Initial Viscosity: TA @ 10 rpm @ 27C: 2800 cps  
Formulation 101-73

**Cationic Lotion**

A low solids, non-oily, moisturizing lotion.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	93.27
2. Rita CA	4.00
3. Cetyl Pyridinium Chloride	1.50
4. Patlac NAL	1.00
5. Methylparaben	0.15
6. Propylparaben	0.05
7. Patlac LA (44%)	+0.03

**Compounding Procedure:**

Heat all ingredients to 165F with agitation. Maintain 165F for 10 minutes. Cool with agitation to 95F. Adjust pH with Patlac LA to 5.0+0.2.

Initial Viscosity, Brookfield T-A @ 10 rpm @ 30C: 5700 cps.  
48 Hour Viscosity T-A @ 10 rpm @ 27C: 14,000 cps.  
Formulation 101-72

**SOURCE: R.I.T.A. Corp.: Suggested Formulation**

Lubriderm Type Lotion

A good replication of the well accepted commercial product.  
A slightly heavy formula for use when problems exist.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Distilled Water	77.60
2. Sorbitol 70% Solution	3.50
Part B:	
3. Forlan 500	6.00
4. Rita CA	0.70
5. Mineral Oil 85/95	8.00
6. Stearic Acid	2.00
7. Methylparaben	0.15
8. Propylparaben	0.05
Part C:	
9. Triethanolamine (50%)	2.00

Compounding Procedure:

Heat Part A and Part B to 165F. Combine with agitation. Add Part C and maintain heat for 10 minutes. Cool with agitation to 95F.

Formulation 103-24

Lubriderm Type Lotion with 1% Patlac IL

A good replication of the well accepted commercial product.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Distilled Water	76.60
2. Sorbitol 70% USP	3.50
Part B:	
3. Forlan 500	6.00
4. Rita CA	0.70
5. Mineral Oil 80/90	8.00
6. Patlac IL	1.00
7. Stearic Acid	2.00
8. Methylparaben	0.15
9. Propylparaben	0.05
Part C:	
10. Distilled Water	1.00
11. Triethanolamine (50%)	1.00

Compounding Procedure:

Heat A and B to 165F. Combine with mixing (add B into A). Add C and maintain temperature for 10 minutes. Cool with mixing.

Formulation 107-116

SOURCE: R.I.T.A. Corp.: Suggested Formulations

**Moisturizing Lotion**

This oil/water skin lotion features excellent emollience, moisturizing and lubricating attributes without an oily or greasy residue. Ritachol is included for its emollient and moisturizing qualities, as well as the low friction characteristics it imparts when this preparation is massaged into the skin. Ritachol is included for its lanolin-related conditioning effects and as a supplemental source of cholesterol.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	86.30
2. Potassium Hydroxide (20% Solution)	2.00
3. Sodium Hydroxide (18% Solution)	0.16
4. Acritamer 934	0.10
5. Methylparaben	0.10
6. Mineral Oil	5.50
7. Stearic Acid	3.09
8. Cholesterol	0.75
9. Ritasol	0.50
10. Ritachol	0.50
11. Rita CA	0.35
12. Myristyl Alcohol	0.20
13. Rita SA	0.10
14. Butyl Paraben	0.20
15. Propyl Paraben	0.15
16. Fragrance	QS
17. Color	QS

**Compounding Procedure:**

Add item 1 into a container and begin stirring by means of a variable speed agitator equipped with a stirrer capable of imparting relatively high shearing stress. Then add item 4 with continuous stirring. Stir until the Acritamer 934 has been completely dispersed and is smooth and free of lumps. Begin heating and add item 5. Heat to 70-73C with continuous stirring. In another container, add all other ingredients, with the exception of Potassium Hydroxide, Sodium Hydroxide and Fragrance. Heat this blend to 70-73C with continuous stirring. Add the oil phase to the water phase with agitation. Continue stirring and maintain the temperature at 70-73C. In another container, using a small amount of water, dissolve the Potassium Hydroxide and Sodium Hydroxide. Use caution when handling these materials. When the Potassium and Sodium Hydroxide have been dissolved, add this to the batch. Begin cooling. With continuous stirring, cool to 40-43C and add the fragrance. Cool to 25-30C and package.

SOURCE: R.I.T.A. Corp.: Formulation H-89-A-9

Moisturizing Lotion

<u>Part:</u>	<u>Ingredient:</u>	<u>Wt. %</u>
A	Deionized Water	74.5
	Polysorbate 20	1.0
	Sorbitol	4.0
	Methyl Paraben	0.2
	Na4EDTA	0.2
	Xanthan Gum	0.2
B	Capric/Caprylic Triglyceride	5.0
	Mineral Oil	1.0
	Isopropyl Myristate	3.0
	Dimethicone	0.5
	Sorbitan Monostearate	3.0
	Polysorbate 60	2.0
	Cetyl Alcohol	2.0
	Ethylene Glycol Monostearate	1.5
	Hydroxypropyl Methylcellulose	0.1
C	Deionized Water	1.5
	Hydrolyzed Animal Protein	0.2
D	Fragrance	0.1
	Citric Acid	Q.S.

pH : 6.5-7.0

Viscosity: 4,100 cps

Appearance: Glossy, flowable white lotion

**Procedure:**

Blend Part A ingredients except xanthan gum. When uniform, sprinkle in the xanthan gum and heat to 65C (150F). Pre-mix Part B, and heat to 65C (150F). When uniform, add Part B to Part A with high shear mixing. Sweep-cool to 40C (105F), and adjust the pH with citric acid. Pre-mix Part C and add to the batch. Add fragrance.

SOURCE: Mazer Chemicals: Formulation No. I-101

Moisturizing Lotion (Cold Preparation)

<u>Ingredients:</u>	<u>% by weight</u>
A Water	90.00
Hydroxypropylmethylcellulose (Methocel 40-100)	0.10
AMP	0.40
Oxaban-A	0.10
Glycerin	2.50
Disodium EDTA	0.10
B White Mineral Oil (Drakeol 9)	3.00
White Petrolatum (Penreco Snow)	3.00
Dimethicone (Silicone SF 96-200)	0.50
Isopropyl Palmitate	1.00
Sodium Isethionate (Hostapon KA)	0.10
Pemulen TR-2	0.20

Procedure:

This procedure is designed for ambient temperature production.

It is important that all ingredients should be sterile.

1. Combine the water, AMP, Oxaban-A, glycerin and disodium EDTA.
2. Vigorously agitate 1 and add hydroxypropylmethylcellulose.
3. In a separate vessel, combine the mineral oil, petrolatum, dimethicone, isopropyl palmitate and sodium isethionate; then add Pemulen TR-2. Mix until uniform.
4. Add 3 to 2 with vigorous agitation.

Formula PF-0187

Moisturizing Lotion (Cold Preparation)

<u>Ingredients:</u>	<u>% by weight</u>
A. Water	90.00
AMP-95	0.40
Oxaban-A	0.10
Glycerin	2.50
Disodium EDTA	0.10
B. Hydroxypropylmethylcellulose	0.10
C. White mineral oil	3.00
White Petrolatum	2.00
Dimethicone	0.50
Isopropyl palmitate	1.00
Sodium isethionate	0.10
D. Acrylates C10-30 alkyl acrylate crosspolymer (Pemulen TR-2)	0.20

Procedure:

Combine A. Vigorously agitate; add B. In a separate vessel, combine C. Add D. Mix until uniform. Add CD to AB with vigorous agitation.

This procedure is designed for ambient temperature production. It is important that all ingredients should be sterile.

SOURCE: Angus Chemical Co.: Formula PF-0219

Moisturizing Lotion

This rich moisturizing lotion helps the skin retain its youthful elasticity. It is a rich formulation to help replenish and maintain the skin's moisture level. LEXQUAT AMG-O is the primary cationic emulsifier with the added benefit of emolliency.

Phase A:	% (w/w)
Deionized water	58.00
Cellose QP-15,000H (Hydroxyethyl Cellulose)	0.30
Glycerine	3.00
Propylene Glycol	2.00
Lexgard M (Methylparaben)	0.20
Lexquat AMG-O	12.00
Phase B:	
Lexol PG-865	15.00
Lexemul 55G	4.50
Myristyl Myristate	1.00
Stearyl Alcohol	2.20
Cetyl Alcohol	1.50
Lexgard P	0.10
Phase C:	
Fragrance	0.20
Procedure:	

Charge batch vessel with water (Phase A). Begin mixing and heating to 78C+2C. Dust in Cellose. When completely hydrated, add remaining material of Phase A to batch. Combine Phase B in a separate vessel and heat to 78C+2C. When uniform slowly add Phase B to Phase A maintaining mixing and temperature. Allow to mix at 78C for 15 minutes. Cool. At 40C, add Phase C to batch. Cool to room temperature.

Observations:

pH (direct): 4.8

Viscosity: 11,000 cps

SOURCE: Inolex Chemical Co.: Formulation SK-103

Deep Moisturizing Lotion

This after-bath lotion gives the benefits of potent skin conditioners while eliminating the tackiness associated with lanolin and petrolatum through the unique emolliency provided by Phospholipid EFA.

Part A:	%
Phospholipid EFA	4.00
Steareth-21	0.40
Water	82.00
Part B:	
Steareth-2	1.60
Anhydrous Lanolin	1.50
Petrolatum	3.00
Octyldodecyl Myristate	2.00
Cetearyl Alcohol	4.00
Dimethicone (100 cS)	1.50

Combine ingredients in both phases separately and heat to 65C. Homogenize (B) into (A) with continued heating until sufficiently mixed. Stir-cool to 45-50C, then add fragrance, color, and preservative as needed before filling.

SOURCE: Mona Industries Inc.: Phospholipid EFA: Formula

**Moisturizing Lotion****Ingredients:****% by weight**

Part A:	
Deionized Water	72.25
Hydroxypropyl Methylcellulose (1.0% solution)	10.00
Glycerin	2.00
Disodium EDTA	0.05
Part B:	
Petrolatum	5.00
Mineral Oil	3.00
Glycol Stearate	2.00
Isostearyl Benzoate	2.00
Paraffin	2.00
Dimethicone (110 cs.)	0.50
Pemulen TR-1	0.30
Part C:	
AMP-95	0.20
Part D:	
Propylene Glycol (and) Diazolidinyl Urea (and)	
Methylparaben (and) Propylparaben	0.70

**Procedure:**

Combine A ingredients. Mix until homogeneous. Combine all B ingredients except Pemulen in a separate vessel. Heat both phases to 60-65C. Confirm that B is homogeneous and at the specified temperature. Add Pemulen to this phase. Agitate to break-up soft lumps of resin. With vigorous agitation, promptly add B to A. Maintain temperature at 60C. Mix for 15-30 minutes or until a smooth, non-grainy dispersion is apparent. Add C and discontinue heating. Continue vigorous agitation to produce a smooth product. When the temperature falls to 40-45C add D. Continue mixing until the product temperature is 30-35C. Cease agitation and fill containers.

SOURCE: Angus Chemical CO.; Formula PF-0224 B.F. Goodrich

**Moisturizing Lotion**

Soft, white, glossy lotion. Contains Kytamer PC, a substantive humectant which contributes to the lasting moisturization of the skin. The mild, nonionic emulsifying pair of Glucamate SSE-20 (o/w) and Glucate SS (w/o) gives the lotion long term stability. Promulgen serves as an auxiliary emulsifier to this o/w lotion.

**Water Phase:**

Kytamer PC (Chitosan PCA)	1.0%
Glucamate SSE-20 (PEG-20 Methyl Glucose Sesquistearate)	1.5
Deionized Water	82.0

**Oil Phase:**

Glucate SS (Methyl Glucose Sesquistearate)	1.5
Promulgen G (Stearyl Alcohol and Ceteareth-20)	4.0
Mineral Oil	10.0
Perfume and Preservative	q.s.

Disperse Kytamer PC in water at room temperature with high speed agitation. When completely dispersed heat to 75C with continuous mixing until clear and uniform. Maintain temperature at 75C and add Glucamate SSE-20. Heat oil phase to 75C. Add the water phase at 75C to oil phase at 75C with good agitation. Continue mixing while slowly cooling to room temp. Add perfume.

SOURCE: Amerchol Corp.; Formula T57-130-1



Moisturizing Cleansing Lotion

This light, elegant moisturizing cleansing lotion applies with a rich lubricity. It deep cleans and softens the skin. Lexquat AMG-M is the primary cationic emulsifier with the added benefit of emolliency.

Phase A:	% w/w
Deionized Water	60.30
Cellose QP-15,000H	1.00
Glycerine	3.00
Propylene Glycol	2.00
Lexgard M	0.20
Lexquat AMG-M	9.00
Phase B:	
Lexol PG-865	15.00
Lexemul 55G	4.50
Myristyl Myristate	1.00
Stearyl Alcohol	2.20
Cetyl Alcohol	1.50
Lexgard P	0.10
Phase C:	
Fragrance	0.20
Procedure:	

Charge batch vessel with water (Phase A). Begin mixing and heating to 78C+2C. Dust in Cellose. When completely hydrated, add remaining material of Phase A to batch. Combine Phase B in a separate vessel and heat to 78C+2C. When uniform slowly add Phase B to Phase A maintaining mixing and temperature. Allow to mix at 78C for 15 minutes. Cool. At 40C, add Phase C to batch. Cool to room temperature.

SOURCE: Inolex Chemical Co.: Formula SK-102

Light Emollient Lotion with Pseudocollagen

Ingredients:	% by weight
Carbopol 1342 2%	15.00
Glycerine	3.00
Phenonip	1.00
Brookswax D	1.00
Liquiwax DICDD	1.00
Evening Primrose Oil	1.00
AMP-95	0.30
Pseudocollagen	5.00
Deionized Water	72.70

Procedure:

1. Heat the Brookswax D, Liquiwax DICDD and Evening Primrose Oil to 50C, until molten.
2. Add the Carbopol dispersion to the water and glycerine. Mix and heat to 50C.
3. Add Part 1 to Part 2 with mixing. Add the AMP-95 to neutralize the Carbopol, then add the Phenonip and the Pseudocollagen.
4. Check pH (approximately 7) and viscosity.

SOURCE: Angus Chemical Co.: Formulation Suggested by Brooks Industries: Formula PF-0185

**Moisturizing Cleansing Lotion**

This light, elegant moisturizing cleansing lotion applies with a rich lubricity. It deep cleans and softens the skin. Lexquat AMG-M is the primary cationic emulsifier with the added benefit of emolliency.

<u>Phase A:</u>	<u>% (w/w)</u>
Deionized water	60.30
Cellose QP-15,000H	1.00
Glycerine	3.00
Propylene Glycol	2.00
Lexgard M	0.20
Lexquat AMG-M	9.00
<u>Phase B:</u>	
Lexol PG-865	15.00
Lexemul 55G	4.50
Myristyl Myristate	1.00
Stearyl Alcohol	2.20
Cetyl Alcohol	1.50
Lexgard P	0.10
<u>Phase C:</u>	
Fragrance	0.20
<u>Procedure:</u>	

Charge batch vessel with water (Phase A). Begin mixing and heating to 78C+-2C. Dust in Cellose. When completely hydrated, add remaining material of Phase A to batch. Combine Phase B in a separate vessel and heat to 78C+-2C. When uniform slowly add Phase B to Phase A maintaining mixing and temperature. Allow to mix at 78C for 15 minutes. Cool. At 40C, add Phase C to batch. Cool to room temperature.

SOURCE: Inolex Chemical Co.: Formulation SK-102

**Pourable Moisturizing Lotion**

This light-bodied pourable moisturizing lotion provides excellent lubricity when applied and worked into the skin. The after-feel is smooth and silky, and the skin is softened without feeling oily. Phospholipid PTS provides emulsification and skin conditioning.

<u>Part A:</u>	<u>%</u>
Phospholipid PTS	2.50
PEG 1450	2.00
Glycerin	3.00
Steareth-20	1.40
Methyl Paraben	0.25
Water	84.30
<u>Part B:</u>	
Steareth-2	0.60
Mineral Oil	2.50
Cetearyl Alcohol	2.00
Isopropyl Isostearate	2.00
Dimethicone (100 cS)	0.20
Propyl Paraben	0.25
<u>Procedure:</u>	

Heat both phases to 65C, and homogenize the oil phase into the water phase. Stir-cool to 40C and add fragrance, coloring or preservative as required. Fill.

SOURCE: Mona Industries, Inc.: PHOSPHOLIPID PTS: Formula

**Multivitamin Hand & Body Lotion****Ingredients:****% by Wt.****Part I:**

Emersol 132	2.00
Arlacel 165	1.50
Acetulan	5.00
Lipovol ALM	5.00
Delytl Prime	4.00
Lexol PG 865	3.00
Cetyl Alcohol, NF	0.50
Silicone SF 96	0.50
Arlacel 80	0.80
Span 80	0.40
Propyl Parasept	0.05
Vitamin E Acetate, USP-FCC (Code 60526)	1.00
Tenox BHT	0.06

**Part II:**

Deionized Water	67.59
Sequestrene Na3	0.05
Propylene Glycol, USP	5.00
Methyl Parasept	0.20
Dexpanthenol (Code #63909)	1.00

**Part III:**

Carbopol 941	0.25
--------------	------

**Part IV:**

Triethanolamine, 98%	0.50
----------------------	------

**Part V:**

Dowicil 200	0.10
-------------	------

**Part VI:**

Vitamin A & D3 Blend (5:1 Ratio) (Code 63857)	1.00
---	------

**Part VII:**

Perfume Oil	0.50
-------------	------

**Procedure:**

Heat Part I to 75C. Heat Part II to 80C. Sift in Carbopol to Part II and mix with an Eppenbach homomixer until a uniform slurry is formed. Add this to Part I using an Eppenbach homomixer and follow with the addition of Triethanolamine. Transfer to a paddle type mixer and cool to 40C with mixing. Then add Part V, Part VI, and Part VII, mixing well between each addition until homogeneous.

**SOURCE:** Roche Chemicals Division: Vitamins for Cosmetics: Formula SC 405

**Nonionic Hand Lotion with Chlorhexidine Gluconate**

A nonionic hand lotion with bactericide. Contains emollients and humectants to soothe skin and relieve dryness. Also contains Panthenol to relieve soreness and promote healing.

<u>Ingredients:</u>	<u>% W/W</u>
1. Mineral Oil	17.00
2. Ritalan C	3.00
3. Ritachol	5.00
4. Ritachol 1000	0.65
5. Ritapro 165	0.65
6. Ritapro 300	1.25
7. Cetyl Alcohol	2.00
8. Supersat AWS 4	2.00
9. DL Panthenol	0.50
10. Methylparaben	0.10
11. Propylparaben	0.05
12. Chlorhexidine Gluconate 20% BP	1.25
13. Distilled Water	66.55

**Compounding Procedure:**

Combine items 1-12 and heat to 75C. Heat item 13 to 75C and add to stirred mixture. Mix until cool.

**Deodorizing Hand Lotion**

A hand lotion with Grilloclin HY-77 to be used when objectionable household or industrial odors have been retained on the hands.

<u>Ingredients:</u>	<u>% W/W</u>
<b>Part A:</b>	
1. Ritachol	2.50
2. Ritawax ALA	1.00
3. Rita GMS	2.00
4. Stearic Acid	2.00
5. Ritalan C	5.00
6. Propylparaben	0.05
7. Methylparaben	0.15
<b>Part B:</b>	
8. Distilled Water	74.10
9. Acritamer 941	0.20
<b>Part C:</b>	
10. Grilloclin HY-77	2.00
11. Dipropylene Glycol	10.00
<b>Part D:</b>	
12. Triethanolamine (50%)	1.00
13. Fragrance	QS

**Compounding Procedure:**

Weigh water of Part B into a jacketed tank equipped with a variable speed mixer capable of creating a vortex. Sprinkle Acritamer 941 into vortex, avoiding any lumps or "fish eyes". Weigh Part A into a separate container and heat both water and oil phase to 80C. Add Part A to Part B with mixing. Mix until uniform. Pre-mix Part C and add to batch. Mix until uniform. Begin cooling. Add Triethanolamine. Mix until uniform. Begin cooling to 45C. Add perfume. Cool to 35C. Package.

SOURCE: R.I.T.A. Corp.: Formulation HB-89-R-24 & HB-89-R-39

**Nonionic Hand Lotions with Chlorhexidine Gluconate**

A nonionic hand lotion with bactericide. Contains emollients and humectants to soothe skin and relieve dryness. Also contains Panthenol to relieve sore skin and promotes healing.

**Ingredients:****Part A:**

1. Mineral oil, 65/75	17.00
2. Ritalan C	3.00
3. Ritachol	5.00
4. Ritachol 1000	0.65
5. Ritasynt IP	0.65
6. Ritapro 300	1.25
7. Cetyl Alcohol	1.00
8. Pationic SSL	1.00

**Part B:**

9. Supersat AWS 4	1.00
10. DL Panthenol	0.50
11. Germall II	0.30
12. Chlorhexidine Gluconate 20% BP	2.50
13. Distilled Water	66.15

**Ingredients:****Part A:**

1. Mineral Oil, 65/75	17.00
2. Ritalan C	3.00
3. Ritachol	5.00
4. Ritasynt IP	0.65
5. Ritapro 300	1.25
6. Cetyl Alcohol	1.00
7. Pationic SSL	1.00

**Part B:**

9. Supersat AWS 4	1.00
10. DL Panthenol	0.50
11. Germall II	0.30
12. Chlorhexidine Gluconate 20% BP	1.25
13. Distilled Water	67.40

**Compounding Procedure:**

Combine ingredients in Part A. Heat to 70C. Combine ingredients in Part B, heating to 70C. Add Part A to Part B at moderate rate while stirring. Mix 10-15 minutes. Begin cooling, cool with mixing to 35C. Package.

SOURCE: R.I.T.A. Corp.: Alternative Formulations HB-89-R-20

O/W Hand and Body Lotion-A

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Steareth-25 (Emulgator E-2568)	2.0
Glyceryl Stearate (Tegin M)	4.5
Stearyl Alcohol	1.5
Stearoxy Dimethicone (Abil Wax 2434)	3.0
Decyl Oleate (Tegosoft DO)	5.0
Octyl Stearate (Tegosoft OS)	4.0
Cetearyl Octanoate (Tegosoft Liquid)	7.0
Tocopherol Acetate	1.0
Phase B:	
Glycerin	3.0
Water	75.0
Sodium Lactate (and) Sodium PCA (and) Glycine (and) Fructose (and) Urea (and) Niacinamide (and) Inositol (and) Sodium Benzoate (and) Lactic Acid (Lactil)	2.0
Phase C:	
Fragrance	Q.S.

O/W Hand And Body Lotion-B

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Steareth-25 (Emulgator E-2568)	2.0
Glyceryl Stearate (Tegin M)	4.5
Stearyl Alcohol	1.5
Jojoba Oil	4.0
Phase B:	
Glycerin	3.0
Water	75.0
Sodium Lactate (and) Sodium PCA (and) Glycine (and) Fructose (and) Urea (and) Niacinamide (and) Inositol (and) Sodium Benzoate (and) Lactic Acid (Lactil)	2.0
Phase C:	
Fragrance	Q.S.

Procedure:

1. Combine the ingredients of Phase A. Heat to 70C.
2. Mix Phase B. Heat to 60C.
3. Combine A/B. Homogenize. Cool to 45C.
4. Add fragrance. Sweep mix and cool to 30C. Dispense.

SOURCE: Goldschmidt Chemical Corp.: Formulations

Pearl Premix

Highly concentrated pearlescent additive in paste form

<u>Ingredient:</u>		<u>Wt. %</u>
Deionized Water		47.0
Propylene Glycol		6.0
Isostearamidopropyl Ethyldimonium		
Ethosulfate	M-Quat 522	22.0
Preservative		QS
Ethylene Glycol Monostearate	Mapeg EGMS	25.0
Triethanolamine		QS

pH (5% in water): 6.0-6.5

Appearance: White pearlescent paste

Procedure:

Blend the first four ingredients, heating to 70C (160F). Add the Mapeg EGMS with good mixing, maintaining the high temperature. When smooth and uniform, adjust pH and fill into suitable containers.

Note:

This premix, prepared ahead of time and packed into conveniently sized containers, can be added at room temperature to cold-mix products such as Family Shampoo A-102 or Cold Mix Hair Conditioner B-106 to impart a pearlescent appearance without heating and cooling steps. Pearl Premix should be added at 3-5% by formula weight.

SOURCE: PPG Industries, Inc.: Formulation B-199

Clear Dilutable Gel

	<u>%(w/w)</u>
Lexquat AMG-O	50.0
Lexcin QX-3000	25.0
Stearalkonium Chloride	25.0

Procedure:

Combine Lexquat and Lexcin. Heat to 75C with mixing and add stearalkonium chloride. Mix until clear. Cool, adjust pH to 4.0-4.5. A clear gel forms on cooling.

adjusted pH (direct): 4.0-4.5

SOURCE: Inolex Chemical Co.: Formulation CD-101

Protective Hand & Body Lotion

<u>Ingredients:</u>	<u>% by Wt.</u>
Part I:	
Parso1 1789	1.50
Parso1 MCX	2.00
Emerso1 132	2.00
Emerest 2400	1.50
Lexo1 PG 865	4.00
Carnation Mineral Oil	3.00
Fluila1	0.50
Propyl Parasept	0.10
Part II:	
Deionized Water	74.50
Sequestrene Na2	0.20
Methyl Parasept	0.25
Carbopol 940	0.15
d1-Pantheno1, Cosmetic Grade (Code 63920)	0.50
Propylene Glycol	5.00
Part III:	
Triethanolamine, 98%	1.00
Part IV:	
Collasol	2.00
Vitamin E Acetate, USP-FCC (Code 60526)	1.50
Part V:	
Perfume Oil	0.30

Procedure:

Disperse Carbopol in the water with rapid agitation. Add the rest of part II and heat to 75C. Heat Part I to 75C. Add Part I to Part II with mixing. Follow with addition of Triethanolamine. Mix with a paddle mixer until the temperature drops to 40C. Add Part IV and mix well. Follow with addition of Perfume and mix until homogeneous.

SOURCE: Roche Chemical Division: Vitamins for Cosmetics: Formula SC 406



Protective Skin Lotion

<u>Materials:</u>	<u>Parts/Wt(%)</u>
Part A:	
Stearic Acid	2.50
Cetyl Alcohol	1.80
Amphisol (cetyl phosphate (and) DEA cetyl phosphate)	2.50
SF1312 or SF1318 (lauryl or isostearyl trimethylolpropane siloxy silicate)	5.00
Neo Heliopan AV(octyl methoxycinnamate)	7.00
SF1202 (cyclmethicone)	5.00
Part B:	
Glycerine	4.00
Dowicil 200 (quaternium-15)	0.10
Keltrol T (xanthan gum)	0.25
Water	71.85
Fragrance	q.s.

Procedure:

- 1) Heat parts A and B in separate containers to 85-90C with agitation.
- 2) Add Part A to Part B with high shear agitation.
- 3) Cool with continued mixing.

Formulation SP108

Silicone Lotion (Water/Oil)

This formulation applies as a very rich lotion, yet dries to a very dry feel.

<u>Materials:</u>	<u>Parts/Wt(%)</u>
Part A:	
SF1228	10.0
SF1202	8.5
SF1214	7.5
Part B:	
Glycerine	3.0
NaCl	1.0
Polysorbate 80	0.2
Water	69.7
Dowicil 200	0.1

Procedure:

- 1) Add Part A ingredients in order as shown, thoroughly mixing each component until homogeneous before adding next ingredient.
- 2) Mix all ingredients of Part B together.
- 3) Add Part B to Part A with good mixing gradually increasing agitation to high shear as mixture thickens. Continue agitation for 5-10 minutes. Mixture will become very thick.
- 4) Mill on homogenizer for 1-2 minutes.

Formulation SP106

SOURCE: GE Silicones: Suggested Formulations

**Rich Moisturizing Skin Lotion**

A glossy white lotion which smooths instantly into the skin, leaving it soft, nonoily, and moisturized.

<u>Part:</u>	<u>Ingredient:</u>	<u>Wt. %</u>
A	Deionized Water	78.5
	Triethanolamine	0.1
	Methyl Paraben	0.2
	Tetrasodium EDTA	0.2
B	Cetearyl Alcohol (and)	
	Ceteareth-20	6.0
	Stearic Acid	1.2
	Benzyl Laurate	3.0
	PPG-10 Butanediol	4.0
	Tetrabutoxypropyl Methicone	5.0
C	Deionized Water	5.0
	Imidazolidinyl Urea	0.2
	Citric Acid, 50%	0.1
	Fragrance	Q.S.

pH: 6.0-6.5

Viscosity: 180,000-185,000 cps (Brookfield TD @ 0.6 rpm)

9,000- 12,000 cps (Brookfield #3 @ 6 rpm)

Appearance: Smooth glossy white lotion

SOURCE: PPG Industries, Inc.: Formulation I-107

**Light Emollient Lotion with Pseudocollagen**

<u>Ingredients:</u>	<u>% by weight</u>
Carbopol 1342, 2%	15.00
Glycerine	3.00
Phenonip	1.00
Brookswax D	1.00
Liquiwax DICDD	1.00
Evening Primrose Oil	1.00
AMP-95	0.30
Pseudocollagen	5.00
Deionized Water	72.70

**Procedure:**

1. Heat the Brookswax D, Liquiwax DICDD and Evening Primrose Oil to 50C, until molten.
2. Add the Carbopol dispersion to the water and glycerine. Mix and heat to 50C.
3. Add Part 1 to part 2 with mixing. Add the AMP to neutralize the Carbopol, then add the Phenonip and the Pseudocollagen.
4. Check pH (approximately 7), and viscosity.

SOURCE: Angus Chemical Corp.: Formulation PF-0208

**Silky Hand Lotion with Silicone**

This light lotion goes on smoothly, and leaves a nongreasy, silicone-fortified barrier

<u>Part:</u>	<u>Ingredient:</u>	<u>Wt. %</u>
A	Phenyl Trimethicone	Masil SF 556 2.0
	Dimethicone	Masil SF 100 0.5
	Isopropyl Myristate	Lexol IPM 2.0
	Mineral Oil	Drakeol 9 3.0
	Cetyl Alcohol	CO-1695 1.5
	Stearic Acid	Emersol 132 0.5
	Ceteareth-20	Macol CSA-20 2.0
	Sorbitan Stearate	S-Maz 20 1.0
	Deionized Water	80.3
	Glycerin	3.0
B	Propylene Glycol	3.0
	Hydroxypropyl Methylcellulose	Methocel 40-100 0.1
	Triethanolamine	0.3
	Preservative	Germaben II 0.6
C	Fragrance	0.1
	Citric Acid	0.1

pH: 6.0-6.5

Viscosity: 31,000 cps (#2@1.5rpm)

23,000 cps (#2@3rpm)

Appearance: Glossy white flowable lotion

**Procedure:**

Premix Part A, heat to 60C. In the main vessel, mix the first four ingredients of Part B. Begin heating to 60C, add triethanolamine to initiate hydration of the hydroxypropyl methylcellulose. With both parts at 60C, slowly add A to B with high shear mixing. Sweep cool to 35C, adding the Part C ingredients at around 40-45C

SOURCE: Mazer Chemicals: Formulation No. I-104

**Hand and Body Lotion**

<u>Phase A:</u>	<u>% Weight</u>
Linoleamidopropyl PG-Dimonium Chloride Phosphate (Phospholipid EFA)	4.00
Water	82.00
Phase B:	
Steareth-2 (Brij 72)	2.00
Light Mineral Oil	4.00
Cetearyl Alcohol (Lanette O)	3.00
Octyldodecyl Myristate	2.50
Dimethicone, 100 cps. (Dow Corning 200 Fluid)	1.50
Phase C:	
Germaben II-E	1.00
Procedure:	

Combine ingredients for Phase A and Phase B separately and heat to 65C. Homogenize Phase B into Phase A with continued heating until sufficiently mixed. Stir-cool to 40C, add Phase C and package.

SOURCE: Sutton Laboratories: Suggested Formulations

Skin Lotion (514117)

Part A:	
Drakeol 21, Mineral Oil USP	20.0 wt%
Polysorbate 60	7.5
Cetyl alcohol	5.0
Sorbitan Stearate	2.5
Part B:	
Deionized water	64.8
Methylparaben	0.1
Propylparaben	0.1

Heat Part A to 55C, and heat Part B to 60C. With stirring, add Part B to Part A, and let cool to room temperature. Fragrance may be added at 40C.

Hand and Body Lotion (514119)

Part A:	
Penreco Mineral Jelly No. 15	75.0 wt%
Sorbitan Sesquioleate	3.0
Mineral Oil (and) Lanolin Alcohol	2.0
Part B:	
Deionized water	20.0
Part C:	
Preservatives	q.s.

Mix the ingredients in Part A and heat to 70C with stirring. Heat Part B to 75C. Add Part B to Part A with stirring. Let the mixture cool to room temperature with stirring. Add fragrance at 40C if desired.

Hand and Face Lotion (514123)

Part A:	
Deionized water	69.75 wt%
Propylene glycol	6.00
Hydroxyethylcellulose	0.20
Triethanolamine	0.20
Carbopol 934	0.15
Part B:	
Drakeol 7, Light Mineral Oil USP	11.00
Glyceryl Stearate	3.00
Penreco Amber, White Petrolatum USP	2.75
Isopropyl myristate	2.00
Stearic Acid	2.00
Sorbitan Stearate	1.00
Stearyl Alcohol	1.00
Dimethicone, 200 cSt	0.50
Vitamin E Acetate	0.15
Part C:	
Preservatives	0.30

Heat each Part separately to 70C. While stirring Part A, add Part B. Stir vigorously until the mixture reaches room temperature. Add Part C and any desired fragrance when the temperature reaches 45C.

SOURCE: Penreco: Penreco Cosmetic Formulary

W/O Alcohol Lotion

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Cetyl Dimethicone Copolyol (Abil EM-90)	2.0
Mineral Oil	16.0
Octyl Stearate (Tegosoft OS)	1.5
Cetyl Dimethicone (Abil Wax 9801)	1.5
Hydrogenated Castor Oil	0.5
Synthetic Wax	0.5
Phase B:	
Cyclomethicone (Abil B 8839)	5.0
Phase C:	
Water	60.3
Sodium Chloride	0.5
Carbomer 940 (1.5% - NaOH Neutralized)	0.2
SD Alcohol 40A	10.0
Phase D:	
Fragrance, Preservatives	Q.S.

W/O Alcohol Lotion

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Cetyl Dimethicone Copolyol (Abil EM-90)	2.0
Mineral Oil	14.0
Octyl Stearate (Tegosoft OS)	3.5
Cetyl Dimethicone (Abil Wax 9801)	1.5
Hydrogenated Castor Oil	0.5
Synthetic Wax	0.5
Phase B:	
Cyclomethicone (Abil B 8839)	5.0
Phase C:	
Water	65.3
Sodium Chloride	0.5
SD Alcohol 40A	5.0
Phase D:	
Fragrance, Preservatives	Q.S.

Procedure:

1. Combine the ingredients of Phase A. Heat to 80C. Mix until uniform and the waxes are dispersed. Cool to 40C.
2. Add the Cyclomethicone.
3. Mix Phase C add to A/B. Slowly add to Phase A/B with low energy stirring. Maintain a milky appearance at all times.
4. Add Phase D.
5. Homogenize.

SOURCE: Goldschmidt Chemical Corp.: Formulations

# **Section IX**

## **Shampoos**

**Aloe Shampoo and Body Wash**

A premium shampoo with Aloe and Panthenol. Combines good cleansing with conditioning. Betaine improves ease of combing. Pationic ISL and Panthenol are deposited to repair hair, moisturize and impart luster.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Distilled Water	40.35
2. Ritaloe IX	15.00
3. d1-Panthenol	0.50
Part B:	
4. Sodium Lauryl Sulfate	25.00
5. Cocamidopropyl Betaine	10.00
6. Lauramide DEA	5.00
7. Pationic ISL	1.75
8. Methylparaben	0.15
Part C:	
9. Kathon CG	0.05
10. Fragrance	0.20
11. Sodium Chloride (25% Solution)	2.00
12. Patlac LA (44%)	QS

**Compounding Procedure:**

Combine ingredients of Part A and heat to 50C. Combine ingredients of Part B and heat to 50C. Combine Part A and Part B with mixing. Adjust pH with Patlac LA (7.0 recommended). Cool to 120F, add perfume and Kathon CG. Mix until uniform. Adjust viscosity with Sodium Chloride solution.

Formulation 112-56

**Deodorizing Shampoo**

A deodorizing shampoo with moisturizing and conditioning properties.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	59.20
2. Grilloclin HY-77	1.00
3. Pationic 138C	4.00
4. Ritapeg 150 DS	1.75
5. Sodium Laureth Sulfate	33.00
6. Glydant 40-700	0.25
7. Methylparaben	0.10
8. Sodium Chloride (25% Solution)	+ -0.70

**Compounding Procedure:**

Heat water, Ritapeg 140 DS, Sodium Laureth Sulfate, Pationic 138C, and Grilloclin to 165F. Mix until uniform. Add Methylparaben. Mix until dissolved. Begin cooling. Cool to 120F. Add Glydant (also add fragrance at this point, if desired). Cool to 80F. Add Sodium Chloride solution to increase viscosity. Package.

Formulation 113-105B

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Amide Free Viscous Clear Shampoo with Pationic ISL

A clear shampoo which can be made without the use of amides, using Pationic ISL as a thickener and conditioner.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Distilled Water	20.00
2. Sodium Laureth Sulfate (2 Mole)	46.50
Part B:	
3. Pationic ISL	5.00
4. Fragrance	0.20
Part C:	
5. Distilled Water (cold)	26.15
Part D:	
6. Sodium Hydroxide (20% Solution)	+0.70
7. Sodium Chloride (25% Solution)	+1.25
8. Glydant 40-700	0.20

Compounding Procedure:

Heat water to Part A to 140F. Blend Part B. Add Part B to Part A, mix. Add Part C to Part AB (Note: Part C water should be cold to bring entire batch to 95F or lower, so it can be filled immediately without using cooling water). Add Glydant solution. Adjust pH to 7.0+-0.1 with sodium hydroxide solution. Adjust viscosity with sodium chloride solution.

Viscosity: 2000 cps

Cloud Point: 22F

Clear Point: 32F

Formulation 104-140

Low Irritation/Sting Shampoo with Pationic 138C

A clear shampoo which has good cleaning properties, yet is proven to have low irritancy characteristics.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Distilled Water	64.08
2. Sodium Laureth Sulfate (2 Mole)	16.67
3. Pationic 138C	10.00
4. Ritamid C	4.00
5. Methylparaben	0.10
Part B:	
6. Triethanolamine (50	2.00
Part C:	
7. Perfume	0.20
8. Glydant 40-700	0.20
Part D:	
9. Sodium Chloride (25% Solution)	2.75

Compounding Procedures:

Heat Part A to 165F. While mixing, adjust to pH 7.5 with Part B. Cool to 120F. Add Part C. Adjust viscosity with Sodium Chloride 25% Solution.

Formulation 103-130

SOURCE: R.I.T.A. Corp.: Suggested Formulation



Amide Free Viscous Clear Shampoo with R.I.T.A. Complex A

A clear shampoo which can be accomplished without the use of amides, using Ritacomplex A as a thickener and conditioner.

Ingredients:	% W/W
Part A:	
1. Distilled Water	20.00
2. Sodium Laureth Sulfate (2 Mole)	46.50
Part B:	
3. Ritacomplex A	3.00
4. Fragrance	0.20
Part C:	
5. Distilled Water (Cold)	28.02
Part D:	
6. Sodium Hydroxide (20% Solution)	+ -0.33
7. Sodium Chloride (25% Solution)	+ -1.75
8. Glydant 40-700	0.20

Compounding Procedure:

Heat Water in Part A to 140F. Add Sodium Laureth Sulfate and mix. (Part A should be about 115F). Add Part B to Part A, mix. Add Part C to Parts AB (Note: Part C water should be cold to bring the entire batch to 95F, or lower, so it can be filled immediately without using cooling water. Add Glydant. Adjust pH to 7.0-0.1 with sodium hydroxide solution. Adjust viscosity with sodium chloride solution.

Viscosity, Brookfield: 1600 cps.

Cloud Point: 25F

Clear Point: 32F

**Note:** This formula can be compounded without using warm water in Part A. However, the mixing time must be extended.

Formulation 103-187A

Amide Free Viscous Clear Shampoo with R.I.T.A. Complex B

A clear shampoo made without the use of amides, using Ritacomplex B as a thickener and conditioner.

Ingredients:	% W/W
Part A:	
1. Distilled Water	47.07
2. Sodium Laureth Sulfate (2 Mole)	46.50
3. Glydant 40-700	0.70
Part B:	
4. Ritacomplex B	2.00
Part C:	
5. Sodium Hydroxide (20% Solution)	+ -0.23
6. Sodium Chloride (25% Solution)	+ -4.00

Compounding Procedure:

Heat Part A to 115F. Add Part A to Part B, mix. Add Part C to parts AB (Note: Water should be cold to bring entire batch to 95F or lower, so it can be filled immediately without using cooling water). Adjust pH to 7.0+/-0.1 with sodium hydroxide solution. Adjust viscosity with sodium chloride solution.

Formulation 103-187B

SOURCE: R.I.T.A. Corp.: Suggested Formulations

**Amphoteric Shampoo with Sunscreen**

	<u>% Weight</u>
Phase A:	
Lauramide DEA (Monamid 716)	1.00
Dimethyl PABA Ethyl Cetearyldimonium Tosylate (Escalol 537Q)	0.20
Phase B:	
Water	47.80
Lauramidopropyl Betaine (Monateric LMAB)	15.00
Sodium Laureth Sulfate (Maprofix ES-1)	35.00
Phase C:	
Germaben II	1.00

**Procedure:**

Combine Phase A and heat to 80C, mixing until Escalol 537Q is completely dissolved. Combine Phase B and heat to 80C. Add Phase A to Phase B. Cool to 50C and Phase C. Cool to room temperature.

**Conditioning Shampoo**

	<u>% Weight</u>
Water	45.15
Sodium Laureth Sulfate (2 Mole EO, 26% active) (Sipon ES-2)	20.00
Sodium Lauryl Sulfate (and) Disodium Lauryl Sulfosuccinate (Monaterge 1164)	20.00
Trisodium Lauroampho PG Acetate Phosphate Chloride (Phosphoteric QL-38)	10.00
Dimethicone, 200 cps. (Dow Corning 200 Fluid)	2.50
Glycol Distearate (Kessco Ethylene Glycol Distearate)	1.00
Cocamide MEA (Monamid CMA)	1.00
Sodium Chloride	0.15
Germaben II	0.20

**Procedure:**

Excluding Germaben II, add ingredients in order listed with agitation. Heat to 70C. Cool to 40C. Adjust pH to 5.5-6.0 with 50% citric acid. Add Germaben II.

**SOURCE: Sutton Laboratories: Suggested Formulations**

**Anti-Dandruff Shampoo**

<b><u>Ingredients:</u></b>	<b><u>% by Weight</u></b>
Stepanol AM-V	50.0
Stepan TAB-2	5.0
Zinc pyrithione (ZPT) 48% dispersion	4.2
Ninol 40-CO	2.0
EDTA	0.2
Glydant	0.2
Citric acid	Q.S.
Sodium hydroxide	Q.S.
Ammonium chloride	Q.S.
D.I. water	Q.S. to 100

**Mixing Procedure:**

Add Stepanol AM-V, Ninol 40-CO, and EDTA to water and heat to 165-170F with mixing. Add Stepan TAB-2 and Zinc Pyrithione 48% dispersion and mix for 30 minutes. Begin to cool to room temperature with mixing. At 120F add preservative and adjust pH to 5.0-6.2 with Sodium Hydroxide or Citric Acid as needed. Adjust to desired viscosity with Ammonium Chloride.

**Typical Properties:**

Appearance: Opaque, liquid

Viscosity: 2500-3500 cps @ 25C

**Comment:**

Stable at 0C, 25C, and 42C for 1 month

Formulation No. 563

**Anti-Dandruff Shampoo**

<b><u>Ingredients:</u></b>	<b><u>% by Weight</u></b>
Stepanol AM-V	51.7
Stepan TAB-2	5.0
Ninol 40-CO	2.0
Selenium Sulfide	1.0
EDTA	0.2
Glydant	0.2
Sodium Hydroxide	Q.S.
Citric Acid	Q.S.
Ammonium Chloride	Q.S.

**Mixing Procedure:**

Into a suitable vessel equipped with mixing, heating and cooling capabilities add DI water, EDTA, Stepanol AM-V, Ninol 40-CO. Begin to agitate and heat to 160-165F. Add Selenium Sulfide. At 145F add Stepan TAB-2 and continue to heat to 160-165F. Agitate the batch for 30 min.\*\* Begin to cool. At 110F add Glydant. Adjust pH to 5.0-6.2 with Sodium Chloride or Citric Acid. Adjust to desired viscosity with Ammonium Chloride.

\*\*If smaller particle size and a pearly product is desired, homogenize the batch at 110-130F.

**Typical Properties:**

Appearance: Opaque, liquid

Viscosity: 2500-3500 cps @ 25C

pH (as is): 5.0-6.2

**Comment:**

Stable at 0C, 25C, and 42C for 1 month

SOURCE: Stepan Co.: Formulation No. 567

**Anti-Dandruff Shampoo**

<u>Ingredients:</u>	<u>% by Weight</u>
Stepanol AM-V	51.8
Stepan TAB-2	5.0
Ninol 40-CO	2.0
Sulfur powder, tech.	2.0
EDTA	0.2
Glydant	0.2
Sodium hydroxide	Q.S.
Ammonium chloride	Q.S.
DI Water	Q.S. to 100

**Mixing Procedure:**

Into a suitable vessel equipped with mixing, heating and cooling capabilities add DI water, EDTA, Stepanol AM-V, Ninol 40-CO. Begin to agitate and heat to 165-170F. Add Stepan TAB-2 and Sulfur powder. At 165-170F homogenize the batch for 10-15 minutes or pass it through a homogenizer. Begin to cool. At 110F add Glydant. Adjust pH if necessary with Sodium Hydroxide or Citric Acid. Adjust to desired viscosity with Ammonium Chloride.

**Typical Properties:**

Appearance: Opaque, liquid  
 Viscosity: 2500-3500 cps @ 25C  
 pH (as is): 5.0-6.2

**Comment:**

Stable at 0C, 25C, and 42C for 1 month.  
 Formulation No. 565

**Anti-Dandruff Shampoo**

<u>Ingredients:</u>	<u>% by Weight</u>
Stepanol AM-V	51.7
Stepan TAB-2	5.0
Ninol 40-CO	2.0
Coal tar mixture	2.0
EDTA	0.2
Glydant	0.2
Sodium hydroxide	Q.S.
Citric acid	Q.S.
Ammonium chloride	Q.S.

**Mixing Procedure:**

Into a suitable vessel equipped with mixing, heating and cooling capabilities add DI water, EDTA, Stepanol AM-V, Ninol 40-CO. Begin to agitate and heat to 160-165F. At 145F add Stepan TAB-2 and Coal Tar Mixture. Continue to heat to 160-165F. Agitate the batch for 30 min. Begin to cool. At 110F add Glydant. Adjust the pH to 5.0-6.2 with Citric Acid or Sodium Hydroxide as needed. Adjust to desired viscosity with Ammonium Chloride.

**Typical Properties:**

Appearance: Opaque, liquid  
 Viscosity: 2500-3500 cps @ 25C  
 pH (as is): 5.0-6.2

**Comment:**

Stable at 0C, 25C, and 42C for 1 month.

**SOURCE:** Stepan Co.: Formulation No. 568

**Anti-Dandruff Shampoo**

<b><u>Ingredients:</u></b>	<b><u>% by Weight</u></b>
Pre-mix:	
D.I. Water	20.00
Stepanol AM-V	5.20
Selenium Sulfide	1.00
Main Batch:	
D.I. Water	57.15
Stepanol AM-V	46.40
Stepan TAB-2	5.00
Ninol 40-CO	2.00
EDTA	0.20
Glydant	0.20
Sodium Hydroxide	Q.S.
Citric Acid	Q.S.
Ammonium Chloride	Q.S.
Mixing Procedure:	
Main Batch:	

Into a suitable vessel equipped with mixing, heating and cooling capabilities add DI water, EDTA, Stepanol AM-V, Ninol 40-CO. Begin agitation and heating to 160-165F. At 145F add Stepan TAB-2. Continue to heat to 160-165F.

**Pre-Mix:**

In a vessel equipped with a high speed mixer prepare pre-mix by adding DI water, Stepanol AM-V, and Selenium Sulfide. Mix the batch for 10 min. at high speed. Add pre-mix to main batch and adjust temp. to 160-165F. Agitate using a propeller mixer for 30 min. Begin to cool. At 110F add Glydant. Adjust pH to 5.0-6.2 with Sodium Hydroxide or Citric Acid. Adjust to desired viscosity with Ammonium Chloride.

**Typical Properties:**

Appearance: Opaque, liquid  
 Viscosity: 2500-3500 cps @ 25C  
 pH (as is): 5.0-6.2

**Comment:**

Stable for 1 month at 0C, 25C, and 42C.

SOURCE: Stepan Co.: Formulation No. 566

**Anti-Dandruff Shampoo**

	<b><u>% by Weight</u></b>
Water	41.0
TEA-Lauryl Sulfate (40%)	30.0
Monatonic CAB	17.0
Monamid 716	3.0
Monamid 150-ADY	3.0
Zinc Pyrithione (48% Aqueous Dispersion)	4.0
Glycol Distearate	2.0

**Procedure:**

Add ingredients in order listed. Mix and heat to 60C. Cool, adjust pH to 6.0. Add coloring, fragrance and preservative as required.

Appearance: Off white, opaque liquid

Viscosity: Approximately 2000 cps.

SOURCE: Mona Industries, Inc.: Suggested Formulation

Antidandruff Shampoo

	<u>%(w/w)</u>
Deionized Water	62.81
TEA Lauryl Sulfate (40%)	18.00
Lexaine C (Cocamidopropyl Betaine)	7.00
Lauramide DEA	7.00
PEG-150 Distearate	2.00
Magnesium Stearate	2.00
Zinc Pyrithione	1.00
Lexgard M (Methylparaben)	0.17
Lexgard P (Propylparaben)	0.02
Sodium Chloride	q.s.

**Procedure:**

Wet magnesium stearate with TEALS, 1/4 water and Lauramide DEA. Heat this slurry to 70C and stir to dissolution. Add remaining water into another vessel and heat to 70C. Add other ingredients to this second vessel and mix thoroughly. Combine slurry from the first vessel to the second vessel, mix, cool to 40C and fill.

**Observations:**

Adjusted pH (direct): 7.0 with citric acid  
Viscosity: 38,000 cps

Formulation SP-86

Conditioning Gel Shampoo

	<u>%(w/w)</u>
Deionized Water	53.00
TEA Lauryl Sulfate (40%)	35.00
Lexaine C (Cocamidopropyl Betaine)	10.00
Lexamine O-13 (Oleamidopropyl Dimethylamine)	0.30
Ammonium Chloride	1.50
Lexgard M (Methylparaben)	0.15
Lexgard P (Propylparaben)	0.05
Citric Acid (to desired pH)	q.s.

**Procedure:**

Add TEA Lauryl Sulfate and Lexaine C to water at 70C. Add Lexamine O-13, maintaining the pH at 5. Add remaining ingredients and fill.

**Observations:**

pH (direct): 5.6  
Viscosity: 17,250 cps

Formulation SP-96

SOURCE: Inolex Chemical Co.: Suggested Formulations

Anti-Dandruff Shampoo

<u>Ingredients:</u>	<u>% by Weight</u>
Pre-Mix:	
D.I. Water	20.0
Stepanol AM-V	20.7
Sulfur Powder, Tech.	2.0
Ninol 40-CO	1.0
Main Batch:	
D.I. Water	56.1
Stepanol AM-V	31.0
Stepan TAB-2	5.0
Ninol 40-CO	1.0
EDTA	0.2
Glydant	0.2
Sodium Hydroxide	Q.S.
Ammonium Chloride	Q.S.

Mixing Procedure:Main Batch:

Into a suitable vessel equipped with mixing, heating and cooling capabilities add DI water, EDTA, Stepanol AM-V, Ninol 40-CO. Begin agitation and heating to 165-170F. At 145F add Stepan TAB-2.

Pre-Mix:

In a vessel equipped with a homogenizer add D.I. water, Stepanol AM-V, Ninol 40-CO, and Sulfur powder. Homogenize the product until a small particle size of sulfur and a homogenous mixture is obtained.

Add pre-mix to main batch, adjust temperature to 165-170F and agitate for 30 minutes. Begin to cool. At 110F add Glydant. Adjust pH to 5.0-6.2 with Sodium Hydroxide or Citric Acid as needed. Adjust to desired viscosity with Ammonium Chloride.

Typical Properties:

Appearance: Opaque, liquid

Viscosity: 2500-3500 cps @ 25C

pH (as is): 5.0-6.2

Comment:

Stable for 1 month at 0C, 25C, and 42C.

SOURCE: Stepan Co.: Formulation No. 564

Viscous, Low Cost Shampoo

This basic formulation may be modified with additives such as ethylene glycol distearate, protein and lanolin. Foaming and cleaning properties are excellent. The viscosity can be decreased or increased by raising or lowering the pH respectively.

	<u>% by Weight</u>
Water and Preservative	78.9
Neodol 25-3A	8.6
Monamine 779	10.0
Monamine 150-ADY	2.5

Add ingredients in order listed and mix with slow agitation. Adjust pH level. At pH 7 viscosity is approximately 5000 cps.

SOURCE: Mona Industries, Inc.: Suggested Formulation

**Cleansing Shampoo**

<u>Ingredients:</u>	<u>%w/w</u>
Water	45.4
Ammonium Laureth Sulfate (30%)	35.0
Ammonium Lauryl Sulfate (30%)	10.0
PEG-18 Glyceryl Oleate/Cocoate (Antil 171)	1.0
Cocamidopropyl Betaine (Tego Betaine L-7)	7.0
Dimethicone Copolyol (Abil B 8852)	0.6
Citric Acid	Q.S. to pH 6.5
Ammonium Chloride	1.0
Fragrance	Q.S.
Color	Q.S.
Preservative	Q.S.

**Procedure:**

1. Dissolve the Tetrasodium EDTA in the water.
  2. Add ingredients in order, mixing between additions. Avoid air entrapment.
  3. Slowly mix in the PEG-18 Glyceryl Glycol Dioleococate.
  4. Adjust viscosity with the 25% solution of Ammonium Chloride.
- Note: For manufacturing ease, a 25% solution of Ammonium Chloride can be made.
- Note: SLS/SLES and Sodium Chloride may be substituted for the ALS/ALES and Ammonium Chloride.

**Gentle Cleansing Shampoo**

<u>Ingredients:</u>	<u>%w/w</u>
Sodium Lauryl Sulfate	15.00
Sodium Laureth Sulfate	25.00
Carbomer 208 (Antil 208)	0.70
PEG-7 Glyceryl Cocoate (Tegosoft GC)	3.00
Cocamidopropyl Betaine (Tego Betaine L-7)	5.00
Dimethicone Copolyol (Abil B 88183)	0.50
Propylene Glycol	1.00
Water	49.70
Tetrasodium EDTA	0.10
Preservatives	Q.S.
Color	Q.S.
Fragrance	Q.S.
Citric Acid (25% Solution)	to pH 6.0
Sodium Chloride (25% Solution)	Q.S.

**Procedure:**

1. Add the ingredients in order. Mix until uniform between additions.
2. Adjust pH with citric acid.
3. Adjust viscosity with the Sodium Chloride

**SOURCE:** Goldschmidt Chemical Corp.: Suggested Formulations



Clear Conditioning Shampoo

Delivers softness and excellent combability to the hair. It's a mild, clear, rich shampoo that provides easy combing and luster properties.

Part A:	<u>%(w/w)</u>
Sodium C14-16 Olefin Sulfonate	15.00
TEA Lauryl Sulfate	10.00
Lexamine LM (Lauramidopropyl Betaine)	10.00
Cocamide DEA	3.00
Maypon 4C (Potassium Coco-hydrolyzed Animal Protein)	3.00

Part B:	
Deionized Water	48.30
Propylene Glycol USP	3.00
Lexgard M (Methylparaben)	0.20
Lexgard P (Propylparaben)	0.10
Uvinul MS-40 (Benzophenone-4)	0.10
Tetrasodium EDTA	0.10

Part C:	
Lexquat AMG-IS (Isostearylamidopropyl Dihydroxypropyl Dimonium Chloride)	7.00

Part D:	
Fragrance	2.00
Color	

Part E:	
Citric acid pH=7.0+/-0.2	q.s.

**Procedure:**

Charge batch vessel with water (part B) and begin mixing. Add the remaining ingredients of part B to the water and heat to 60C+-2C. When materials are completely dissolved, add Part A to Part B. Maintain temperature and mixing. When uniform, add Part C to the batch. Begin cooling. At 40C-45C, add Part D. Cool to room temperature and adjust the pH (Part E).

**Observations:**

pH: 7.2

Viscosity: 500 cps

SOURCE: Inolex Chemical Co.: Formulation SP-103

**Clear Protein Shampoo**

	<u>%(w/w)</u>
Deionized Water	60.80
Sodium Lauryl Sulfate	30.00
Lexaine C (Cocamidopropyl Betaine)	6.00
Lexein QX3000 (Quaternium-76)	3.00
Lexgard M (Methylparaben)	0.15
Lexgard P (Propylparaben)	0.05
Sodium Chloride (to desired viscosity)	q.s.
Phosphoric Acid (to desired pH)	q.s.

**Procedure:**

Heat water to 70C. Add sodium lauryl sulfate and Lexaine C slowly with agitation. Adjust pH then add remaining ingredients at 55C.

**Observations:**

pH (direct): 6.1

Viscosity: 560 cps

Formulation SP-89

**Clear Conditioning Shampoo**

Lexquat AMG-BEO is the primary conditioning agent in this luxurious, clear conditioning shampoo. It features improved softness and shine with easier comb-out.

<b>Part A:</b>	<u>%(w/w)</u>
Sodium C14-16 Olefin Sulfonate	15.00
TEA Lauryl Sulfate	10.00
Lexamine LM (Lauramidopropyl Betaine)	10.00
Cocamide DEA	3.00
Maypon 4C (Potassium Coco-hydrolyzed Animal Protein)	3.00
<b>Part B:</b>	
Deionized Water	48.30
Propylene Glycol USP	3.00
Lexgard M (Methylparaben)	0.20
Lexgard P (Propylparaben)	0.10
Uvinul MS-40 (Benzophenone-4)	0.10
Tetrasodium EDTA	0.10

**Part C:**

Lexquat AMG-BEO (Behenamidopropyl Dihydroxypropyl Dimonium Chloride)	7.00
--	------

**Part D:**

Fragrance	0.20
-----------	------

**Color****Part E:**

Citric acid, pH=5.5+-0.2	q.s.
--------------------------	------

**Procedure:**

Charge batch vessel with water (Part B) and begin mixing. Add the remaining ingredients of Part B to the water and heat to 60+-2C. When materials are completely dissolved, add Part A to Part B. Maintain temperature and mixing. When uniform, add Part C to the batch. Begin cooling. At 40-45C, add Part D. Cool to room temperature and adjust the pH (Part E).

**Observations:**

pH: 5.5

Viscosity: 6000 cps

SOURCE: Inolex Chemical Co.: Formulation SP-104

Clear Conditioning Shampoo

Features improved softness and shine with easier comb-out.

Part A:	% (w/w)
Sodium C14-16 Olefin Sulfonate	15.00
TEA Lauryl Sulfate	10.00
Lexamine LM (Lauramidopropyl Betaine)	10.00
Cocamide DEA	3.00
Maypon 4C (Potassium Coco-Hydrolyzed Animal Protein)	3.00

Part B:	
Deionized Water	48.30
Propylene Glycol USP	3.00
Lexgard M (Methylparaben)	0.20
Lexgard P (Propylparaben)	0.10
Uvinul MS-40 (Benzophenone-4)	0.10
Tetrasodium EDTA	0.10

Part C:	
Lexquat AMG-BEO (Behenamidopropyl Dihydroxypropyl Dimonium Chloride)	7.00

Part D:	
Fragrance	0.20
Color	

Part E:	
Citric acid pH = 5.5+/-0.2	q.s.

**Procedure:**

Charge batch vessel with water (part B) and begin mixing. Add the remaining ingredients of Part B to the water and heat to 60C+/-2C. When materials are completely dissolved, add Part A to Part B. Maintain temperature and mixing. When uniform, add Part C to the batch. Begin cooling. At 40-45C, add Part D. Cool to room temperature and adjust the pH (Part E).

**Observations:**

pH: 5.5  
Viscosity: 6000 cps

SOURCE: Inolex Chemical Co.: Formulation SP-104

**Clear Conditioning Shampoo**

Lexquat AMG-M delivers softness and excellent combability to the hair. Although highly cationic, Lexquat AMG-M is completely compatible with anionic surfactants and does not have a significant adverse effect on their foaming. Lexquat AMG-M is highly substantive to the hair, without build-up, so the hair is left natural, healthy and bouncy.

	<u>% (w/w)</u>
Part A:	
Sodium C14-16 Olefin Sulfonate	15.00
TEA Lauryl Sulfate	10.00
Lexamine LM (Lauramidopropyl Betaine)	10.00
Cocamide DEA	3.00
Maypon 4C (Potassium Coco-Hydrolyzed Animal Protein)	3.00
Part B:	
Deionized Water	50.20
Propylene Glycol USP	3.00
Lexgard M (Methylparaben)	0.30
Lexgard P (Propylparaben)	0.10
Uvinul MS-40 (Benzophenone-4)	0.10
Tetrasodium EDTA	0.10
Part C:	
Lexquat AMG-M (Lauramidopropyl Dihydroxypropyl Dimonium Chloride)	5.00
Part D:	
Fragrance	0.20
Color	qs
Part E:	
Citric acid	qs to pH

**Procedure:**

Charge batch vessel with part B and begin mixing and heating to 60C+-2C. Add part A to batch. Add part C to batch. Cool to 45C and add part D. Cool to room temperature, and add part E.

Adjusted pH (direct): 6.0+-0.2

Formulation SP-100

**Clear Bar Conditioning Shampoo**

This clear bar shampoo provides copious foam, mildness, as well as superior cleaning and rinsing properties.

	<u>% (w/w)</u>
Sodium Stearate C-1	30.00
Standapol WAQ Special (Sodium Lauryl Sulfate)	10.00
Propylene Glycol USP	20.00
Glycerine	3.00
Lexquat AMG-O (Oleamidopropyl Dihydroxypropyl Dimonium Chloride)	5.00
Lexaine LM (Lauramidopropyl Betaine)	15.00
Maypon 4CT (TEA-Coco-Hydrolyzed Animal Protein)	7.00
Tauranol WSP (Sodium Methyl Cocoyl Taurate)	10.00

**Procedure:**

Charge batch vessel with propylene glycol. Begin gentle mixing with heat to 80C+-2C. Add the remaining raw materials while continuing the gentle mixing. Pour into the mold. Cool to room temperature.

SOURCE: Inolex Chemical Co.; Formulation SP-105

Clear Shampoo

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Distilled Water	51.85
2. Sodium C14-16 Olefin Sulfonate	37.50
3. Methylparaben	0.10
Part B:	
4. Ritapeg 150 DS	3.50
5. Pationic ISL	3.00
Part C:	
6. Perfume	0.10
7. Kathon CG	0.05
Part D:	
8. Sodium Chloride (25% Solution)	3.50
9. Sodium Hydroxide (18% Solution)	0.40

Compounding Procedure:

Heat Part A and Part B to 165F. Add Part B to Part A with agitation and maintain heat for 10 minutes. Cool to 120F and add Part C. Adjust pH to 7.0+/-0.1 with Sodium Hydroxide solution. Adjust viscosity with Sodium Chloride solution.

Formulation 103-92

Clear Shampoo

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Distilled Water	48.52
2. Sodium Laureth Sulfate (2 Mole)	46.50
3. Glydant 40-700	0.20
Part B:	
4. Pationic ISL	2.25
5. Ritapeg 150 DS	0.75
Part C:	
6. Sodium Hydroxide (20% Solution)	+/-0.28
7. Sodium Chloride (25% Solution)	+/-1.50

Compounding Procedure:

Heat Part B to 165F, blend. Heat Part A to 115F. Add Part B to Part A, mix. Adjust pH to 7.0+/-0.1 with Sodium Hydroxide Solution. Cool to 90F. Adjust viscosity with Sodium Chloride solution.

Formulation 103-187C

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Clear Shampoo for Oily Hair

	<u>%(w/w)</u>
Deionized Water	63.70
Sodium Lauryl Sulfate	15.00
Lauramine Oxide	5.00
Lexaine LM (Lauramidopropyl Betaine)	5.00
Lauramide DEA	5.00
Propylene Glycol USP	6.00
Lexgard M (Methylparaben)	0.20
Lexgard P (Propylparaben)	0.10

**Procedure:**

Combine with mixing. Adjust pH.

**Observation:**

Adjusted pH (direct): 7.5 with citric acid

Formulation SP-102

Clear Shampoo for Normal to Dry Hair

	<u>%(w/w)</u>
Ammonium Lauryl Sulfate	20.00
Lexaine LM (Lauramidopropyl Betaine)	10.00
Cocamide DEA	7.50
Maypon 4CT (TEA-Coco-Hydrolyzed Animal Protein)	5.00
Alpha Olefin Sulfonate 90%	4.00
Deionized Water	50.20
Propylene Glycol USP	3.00
Lexgard M (Methylparaben)	0.20
Lexgard P (Propylparaben)	0.10

**Procedure:**

Combine with mixing. Adjust pH.

**Observation:**

Adjusted pH (direct): 6.0 with citric acid

SOURCE: Inolex Chemical Co.: Formulation SP-101

Clear Viscous Shampoo

<u>Ingredients:</u>	<u>% by Weight</u>
Stepanol AM-V	35.0
Amphosol CA	12.0
Ninol 49-CE	2.2
Propylene glycol	1.0
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Ammonium chloride	Q.S.
D.I. water	Q.S. to 100

Mixing Procedure:

Add first four components to D.I. water and heat to 50C with mixing. Adjust pH to 6.0-7.0 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with ammonium chloride.

Physical Properties:

Clear, yellow liquid

Viscous gel

Stable at elevated temperature and through three freeze thaw cycles

pH: 6.0-7.0 (as is)

Formulation No. 68

Every Day Shampoo

<u>Ingredients:</u>	<u>% by Weight</u>
Stepanol AM-V	35.0
Amphosol CA	5.0
Ninol 40-CO	5.0
Propylene glycol	3.0
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Ammonium chloride	Q.S.
D.I. Water	Q.S. to 100

Mixing Procedure:

Add the first four components to the D.I. water and heat to 40C with mixing. Adjust pH to 6.0-7.0 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with ammonium chloride.

Physical Attributes:

pH (as is): 6.0-7.0

Viscosity: as is: 4,050 cps

0.5% sodium chloride: 9,850 cps

Clear, yellow liquid

Stable for two weeks at 50C

Passed freeze thaw test

Comment:

Formulation 69 had slightly better foam volume in Stepan salon evaluation than a leading brand of shampoo.

SOURCE: Stepan Co.: Formulation 69

**Conditioning Mousse Shampoo with Vitamins**

<u>Ingredients:</u>	<u>% by Wt.</u>
Part I:	
Tween 20	2.00
Vitamin E Acetate USP-FCC (Code 60526)	0.20
Ceraphyl 60	2.00
Miranol BT	5.00
Super Amide 128T	1.00
Standapol SH-100	10.00
Standapol ES-2	38.00
Part II:	
Deionized Water	q.s. to 100
Methyl Parasept	0.10
Propyl Parasept	0.05
Part III:	
dl-Panthenol, Cosmetic Grade (Code 63920)	1.00
Perfume Oil	q.s.
Procedure:	
Predissolve Vitamin E Acetate in Tween 20, then mix all ingredients in Part I in the order listed until each one is thoroughly dissolved. Heat Part II to 65C to dissolve the parabens. Add Part II to Part I and mix. Let cool to room temperature. Add Part III and mix. Fill and pressurize.	
<u>Aerosil Fill:</u>	<u>% by Wt.</u>
Concentrate	95.00
Propellant A-46	5.00

**Vitamin Moisturizing Shampoo**

<u>Ingredients:</u>	<u>% by Wt.</u>
Part I:	
Standapol A	35.00
Monateric ISA-35	4.00
Monamate CPA-40	5.00
Cerasynt IP	1.00
Monamid 716	3.00
Part II:	
Deionized Water	45.00
dl-Panthenol, Cosmetic Grade (Code 63920)	1.00
Biotin, FCC (Code 63344)	0.05
Part III:	
Dowicil 200	0.10
Sodium Chloride	0.50
Perfume Oil	0.40
Citric Acid, USP-FCC (Code 69941)	q.s.
Part IV: Deionized Water	q.s. to 100.00
Procedure:	
A. Weigh Part I ingredients into a suitable container. Heat to 65C with stirring until uniform. B. Dissolve Part II ingredients and heat to 65C. Add to Part I. Stir well. C. Cool to 40C with stirring. Add Part III ingredients stirring well after each addition. D. Adjust to pH 6.5 with Citric Acid and q.s. with water. E. Adjust viscosity to 2800 cps with Sodium Chloride.	
SOURCE: Roche Chemical Division: Formulations MU 501 and HC 201	



**Conditioning Shampoo**

<u>Ingredients:</u>	<u>% by Weight</u>
Stepanol AM-V	70.0
Stepan TAB-2	5.0
Ninol 40-CO	2.0
Silicone DC-200 (12,500 cs)	0.5
EDTA	0.2
Glydant	0.2
Citric acid	Q.S.
Sodium hydroxide	Q.S.
Ammonium chloride	Q.S.
D.I. water	Q.S. to 100

**Mixing Procedure:**

Add Stepanol AM-V, Ninol 40-CO and EDTA to water and heat to 165-170F with mixing. Add Stepan TAB-2 and Silicone and mix for 30 minutes. Cool to room temp with mixing. Add preservative and adjust pH to 5.8-6.2 with Citric acid or Sodium hydroxide as needed. Adjust to desired viscosity with Ammonium Chloride.

**Typical Properties:**

Appearance: Opaque, liquid  
 Viscosity: 2500-3500 cps @ 25C  
 pH (as is): 5.8-6.2

**Comment:**

Stable at 0C and 25C for 1 month and 42C for 3 months.  
 Formulation No. 557

**Conditioning Shampoo**

<u>Ingredients:</u>	<u>% by Weight</u>
Stepanol AM-V	70.0
Stepan TAB-2	5.0
Zinc pyrithione (ZPT) 48% Dispersion	4.2
Ninol 40-CO	2.0
Silicone DC-200 (12,500 cs)	0.5
EDTA	0.2
Glydant	0.2
Citric acid	Q.S.
Sodium hydroxide	Q.S.
Ammonium chloride	Q.S.
D.I. water	Q.S. to 100

**Mixing Procedure:**

Add Stepanol AM-V, Ninol 40-CO, and EDTA to water and heat to 165-170F with mixing. Add Stepan TAB-2, Silicone and Zinc Pyrithione and mix for 30 minutes. Cool to room temperature with mixing and add preservative. Adjust pH to 5.0-6.2 with Sodium hydroxide or Citric acid as needed. Adjust to desired viscosity with Ammonium chloride.

**Typical Properties:**

Appearance: Opaque, liquid  
 Viscosity: 2500-3500 cps @ 25C  
 pH (as is): 5.0-6.2

Comment: Stable at 0C and 25C for 1 month and 42C for 3 months  
 SOURCE: Stepan Co.: Formulation No. 561

**Conditioning Shampoo**

	<u>%(w/w)</u>
Deionized Water	47.80
Sodium Laureth Sulfate (30%)	32.00
Lexaine C (Cocamidopropyl Betaine)	15.00
Lexamine O-13 (Oleamidopropyl Dimethylamine)	3.00
Lexein X250 (Hydrolyzed Animal Protein)	2.00
Lexgard M (Methylparaben)	0.15
Lexgard P (Propylparaben)	0.05
Lactic Acid (to desired pH)	q.s.

**Procedure:**

Disperse sodium laureth sulfate and Lexaine C into water at 70C. Adjust pH to 4.0. Slowly add Lexamine O-13, maintaining the pH at 4.0. Add remaining ingredients, cool and fill.

The viscosity can be increased by adding sodium chloride to the formula.

**Observations:**

pH (direct): 4.0

Viscosity: 200 cps

Formulation SP-97

**Conditioning Shampoo**

	<u>%(w/w)</u>
Deionized Water	43.70
Sodium C14-16 Olefin Sulfonate (40%)	45.00
Lexaine C (Cocamidopropyl Betaine)	8.00
Lexamine S-13 (Stearamidopropyl Dimethylamine)	1.00
Ammonium Chloride	2.10
Lexgard M (Methylparaben)	0.15
Lexgard P (Propylparaben)	0.05
Citric Acid (to desired pH)	q.s.

**Procedure:**

Heat water to 70C. Add sodium C14-16 olefin sulfonate and Lexaine C and mix until homogeneous. Add Lexamine S-13, maintaining the pH at 5. Add remaining ingredients, cool and fill. Viscosity can be increased by raising the level of ammonium chloride.

**Observations:**

pH (direct): 5.0

Viscosity: 225 cps

SOURCE: Inolex Chemical Co.: Formulation SP-98

Conditioning Shampoo

	<u>% Weight</u>
Polyquaternium-10 (Celquat SC-240)	0.70
Cocoamphodiacetate (and) Disodium Cocoamido MIPA-Sulfosuccinate (Monateric 805)	18.80
TEA-Lauryl Sulfate (Stepanol WAT)	18.50
Lauramide DEA (Monamid 1034)	4.00
Propylene Glycol	2.00
Citric Acid	0.50
Germaben II	0.50
Fragrance	0.20
Water	54.80

Procedure:

Dissolve Celquat SC-240 in half of the water by sifting into water while mixing. In a separate vessel, combine all remaining ingredients except citric acid. When both solutions are complete, add the Celquat solution to the surfactant solution while mixing. When homogeneous, add citric acid and mix until dissolved.

Conditioning/Highlighting Shampoo

	<u>% Weight</u>
Ammonium Lauryl Sulfate (and) Ammonium Laureth Sulfate (and) Cocamidopropyl Betaine (and) Cocamide DEA (and) Lauramide DEA (and) Citric Acid (Witcodet AEG)	33.00
Polyquaternium-7 (Merquat 550)	3.00
Water	55.00
Nettle Extract	2.00
Comfrey Root Extract	2.00
Chamomile Extract	2.00
Henna Extract	2.00
Germaben II	0.50
Fragrance (Bell Fragrance J-5226)	0.50

Procedure:

Mix all ingredients gently while heating to a maximum of 45-50C. If necessary, adjust viscosity with sodium chloride (approximately 0.1%). Allow product to cool and package.

**SOURCE:** Sutton Laboratories: Suggested Formulas

Conditioning Shampoo

<u>Ingredients:</u>	<u>% by Weight</u>
Steol CS-330	30.0
Stepanol AM-V	15.0
Ammonyx LO	1.0
Ninol 55-LL	2.0
Glycerine	3.0
Hydroxypropyl methylcellulose	0.4
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Sodium chloride	Q.S.
Deionized water	Q.S. to 100

Mixing Procedure:

Heat one third of D.I. water to 80C. Add methylcellulose and mix until the particles are wetted. While cooling to room temperature, add remaining D.I. water and mix until the solution is clear and particle free. Add the first five components and mix until homogeneous. Adjust pH to 6.0-6.3 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with sodium chloride.

Clear light yellow liquid

Stable over freeze/thaw and elevated temperature

Viscosity Response @ 25C

0% Sodium chloride 65 cps

5% Sodium chloride 400 cps

Formulation No. 27

Clear Conditioning Shampoo

<u>Ingredients:</u>	<u>% by Weight</u>
Bio-Terge AS-40	25.0
Amphosol CA	5.0
Ninol 49-CE	2.5
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Sodium chloride	Q.S.
D.I. water	Q.S. to 100

Mixing Procedure:

Add the first four components to D.I. water. Adjust pH to 6.0-7.0 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with sodium chloride.

Physical Properties:

Clear yellow liquid

pH (as is): 6.0-7.0

Viscosity Profile: As is: 40 cps

1.0% sodium chloride: 70 cps

3.0% sodium chloride: 1,490 cps

4.0% sodium chloride: 1,680 cps

SOURCE: Stepan Co.; Formulation No. 65

Conditioning Shampoo

An opaque pearlized conditioning shampoo with low eye irritation.

Ingredients:

% W/W

## Part A:

1. Grilloten LSE 87K Soft	4.00
2. Luviquat FC 550	1.00
3. Distilled Water	10.00

## Part B:

4. Sodium Laureth Sulfate-40 Mole	42.00
5. Cocamidopropyl Betaine	8.00
6. PEG-55 Propylene Glycol Oleate	2.00
7. Ritasynt IP	3.00
8. Distilled Water	30.00

## Part C:

9. Perfume, Preservative	QS
--------------------------	----

Compounding Procedure:

Combine Sodium Laureth Sulfate, water and Cocamidopropyl Betaine in main tank. Begin heating to 170F. Add Ritasynt-IP and PEG-55 Propylene Glycol Oleate. Continue mixing and maintain temperature. Weigh Part A materials in separate tank. Heat with agitation to 170F. Examine Part B for uniformity. When Part B is uniform add Part A to Part B with agitation. Mix until uniform. Begin cooling. Cool to 120F. Add perfume and preservative. Cool to 95F. Package.

Formulation H-89-G-20

Conditioning Shampoo for Dry Hair

A premium quality, mild, moisturizing shampoo. This shampoo will moisturize the hair with Pationic ISL. The Pationic ISL is substantive to the hair and will retain moisture. The Simchin brand Jojoba Oil will give sheen to the hair.

Ingredients:

% W/W

1. Sodium C14-16 Olefin Sulfonate	18.75
2. Sodium Cocoyl Sarcosinate	25.00
3. Glycerin	3.00
4. Pationic ISL	3.50
5. Lauramide DEA	2.00
6. Ritapeg 150 DS	2.00
7. Simchin	0.50
8. Distilled Water	45.25
9. Pationic LA (44%)	QS
10. Color, Fragrance and Preservatives	QS

Compounding Procedures:

Combine items 1 and 2. Heat to 45C. Mix well. Add items 3 through 7 maintaining heat at 45C. Mix well. Add item 8, still maintaining heat at 45C. Mix well. Adjust pH to 5.5 with Patlac LA. Add remaining ingredients. Mix well.

Formulation H-89-S-11

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Conditioning Shampoo

An excellent low viscosity conditioning shampoo which has the ability to suspend pearlescent pigments.

<u>Ingredients:</u>	<u>% wt.</u>
A. Water (q.s to 100%)	64.55
Cellulose Gum (CMC)	0.50
Xanthan Gum (Keltrol)	0.60
Preservative	q.s.
B. TEA-Lauryl Sulfate (Standapol T)	25.00
Lauramide DEA (Monamid 716)	3.50
Keratin	0.80
C. Timica Gold Sparkle 212P	0.05
Water	5.00
Fragrance	q.s.
FD&C water soluble dyes	q.s.

Procedure:

- I. Disperse Cellulose and Xanthan gums into de-ionized water with high shear agitation.
- II. Add Phase B ingredients to Phase A and mix until uniform.
- III. Add pre-mixed Phase C to Phase A-B with gentle agitation.
- IV. Tint to desired shade with FD&C water soluble dyes.
- V. Adjust to pH 5.0 with Citric Acid.

Typical Properties:

Color: Light green with gold sparkle to match standard  
 Odor: Characteristic to match standard  
 Appearance: Lustrous to match standard  
 pH: 5.0+/-0.5  
 Specific Gravity: 0.994+/-0.100  
 Viscosity: 129+/-10 cps

SOURCE: The Mearl Corp.: Formulation CLT-910931

Family Shampoo

Jordapon CI Dispersion	3.0%
Ammonium Lauryl Sulfate	25.0
Cocamidopropyl Hydroxysultaine	8.0
Cocamide DEA	1.0
Preservative, EDTA, Fragrance, Citric Acid	0.8
Water	62.2

Procedure:

Blend the water, Jordapon CI Dispersion, ammonium lauryl sulfate, preservative, and EDTA. When uniform, add the Mafo CSB-50, Mazamide 80, and fragrance. Adjust the pH to 6.0-6.5 with citric acid. Final viscosity: 5000 cps.

SOURCE: PPG Industries, Inc.: Formulation 7003-45

**Dandruff Control Shampoo**

<b><u>Ingredients:</u></b>	<b><u>% by Weight</u></b>
Part A:	
D.I. Water	40.00
Magnesium Aluminum Silicate	1.00
Hydroxypropyl Methylcellulose	0.70
Part B:	
Bio-Terge AS-40	30.00
Amphosol CA	8.30
Part C:	
Selenium Sulfide	1.00
Titanium Dioxide	0.70
Citric Acid	Q.S.
Fragrance, Dye, Preservative	Q.S.
Sodium Chloride	Q.S.
D.I. Water	Q.S. to 100

**Mixing Procedure:**

Heat water in Part (A) to 70C. Add magnesium aluminum silicate and disperse. Add hydroxypropyl methylcellulose slowly, mixing until completely homogeneous. Remove (A) from heat source and stir in (B). Mix thoroughly. Blend in titanium dioxide to mixture, mixing until thoroughly dispersed. Repeat with selenium sulfide. Adjust pH to 4.0-5.0 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with sodium chloride. Complete process by homogenizing product.

**Physical Properties:**

Viscosity @ 25C: 4,450 cps  
 Orange, opaque liquid  
 pH (as is): 4.0-5.0  
 Formulation No. 392

**Dandruff Control Shampoo**

<b><u>Ingredients:</u></b>	<b><u>% by Weight</u></b>
Part A:	
D.I. Water	52.5
Magnesium Aluminum Silicate	1.0
Hydroxypropyl Methylcellulose	0.8
Part B:	
Bio-Terge AS-40	35.0
Ninol 96-SL	3.5
Hydrolyzed Animal Protein	2.0
Ninol 201	3.0
Part C:	
Zinc Pyrithione (48% Dispersion)	4.2

**Mixing Procedure:**

Heat the water in Part A to 70C. Add magnesium aluminum silicate and disperse. Add hydroxypropyl methylcellulose slowly, mixing until completely homogeneous. Remove (A) from heat source and stir in Part (B). Mix thoroughly. Blend in zinc pyrithione to mixture, mixing until thoroughly dispersed. Adjust pH to 4.0-5.0 with citric acid. Add fragrance, dye and preservative, if desired. Complete process by homogenizing product.

White, opaque liquid  
 Viscosity @ 25C: 5,250 cps  
 pH (as is): 4.0-5.0

SOURCE: Stepan Co.; Formulation No. 382

Detangling Shampoo

A viscous, clear shampoo with conditioning effects. Contains Simchin WS (water soluble Jojoba Oil) to replace oils, Grilloten to reduce irritation and stripping, and Betaine for conditioning.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	62.00
2. Hydroxypropyl Methylcellulose	1.00
3. Grilloten LSE 87	1.00
4. Sodium C14-16 Olefin Sulfate	30.00
5. Cocamidopropyl Betaine	5.00
6. Simchin WS	1.00
7. Patlac LA (44% Solution)	QS
8. Color, Fragrance and Preservatives	QS

Compounding Procedure:

Prepare dispersion of ingredients 1 and 2. Weigh ingredient 3. When the gum is completely dissolved, warm ingredient 3 gently to liquefy and add to batch. Add ingredients 4, 5 and 6 to the batch, mixing until uniform between additions. Add perfume, color and preservative, mixing until uniform. Adjust pH to 5.5 with Patlac LA lactic acid.

Formulation H-89-G-9

Detangling Shampoo

A viscous, light foaming conditioning shampoo.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	+73.00
2. Hydroxypropyl Methylcellulose	1.00
3. Grilloten LSE 87	2.00
4. Sodium C14-16 Olefin Sulfate	18.00
5. Cocamidopropyl Betaine	5.00
6. Simchin WS	1.00
7. Patlac LA (44.0%)	QS
8. Color, fragrance and preservatives	QS

Compounding Procedures:

Heat water to 70C and add item 2 into water with good agitation. Add Grilloten LSE 87. Add item 4, 5 and 6 and continue agitation. Begin cooling. Cool to 120F. Add item 7 to pH 5.5. Add color, fragrance and preservative. Cool to 95F.

Formulation H-89-S-3

SOURCE: R.I.T.A. Corp.: Suggested Formulations



Economy Shampoo

	<u>%(w/w)</u>
Deionized Water	75.80
Ammonium Lauryl Sulfate (30%)	18.00
Lexaine CG-30 (Cocamidopropyl Betaine)	5.00
Ammonium Chloride	1.00
Lexgard M (Methylparaben)	0.15
Lexgard P (Propylparaben)	0.05
Phosphoric Acid (to desired pH)	q.s.

**Procedure:**

Heat water to 70C. Slowly add ingredients and blend until clear. Adjust final pH and fill.

**Observations:**

pH (direct): 6.0  
Viscosity: 100 cps

Formulation SP-91

Economy Shampoo

	<u>%(w/w)</u>
Deionized Water	61.00
Sodium C14-16 Olefin Sulfonate (40%)	28.00
Lexaine CS (Cocamidopropyl Betaine)	6.30
Ammonium Chloride	2.50
Cocamide DEA	2.00
Lexgard M (Methylparaben)	0.15
Lexgard P (Propylparaben)	0.05
Phosphoric Acid (to desired pH)	q.s.

**Procedure:**

Heat water to 70C. Add ingredients and blend until clear.

**Observations:**

pH (direct): 6.0  
Viscosity: 3,000 cps

SOURCE: Inolex Chemical Co.: Formulation SP-92

**Everyday Soft Highlights Shampoo**

<b><u>Ingredients:</u></b>	<b><u>% w/w</u></b>
PEG-7 Glyceryl Cocoate (Tegosoft GC)	4.00
Ammonium Lauryl Sulfate	17.00
Ammonium Laureth Sulfate	22.00
PEG-18 Glyceryl Oleate/Cocoate (Antil 171)	2.50
Dimethicone Copolyol (Abil B 88183)	1.00
Water	47.15
Tetrasodium EDTA	0.10
Cocamidopropyl Betaine (Tego Betaine L-7)	6.00
Sodium Lactate (and) Sodium PCA (and) Glycine (and) Fructose (and) Urea (and) Niacinamide (and) Inositol (and) Sodium Benzoate (and) Lactic Acid (Lactil)	0.25
Citric Acid (25% Solution)	to pH 6.0
Preservatives	Q.S.
Color	Q.S.
Fragrance	Q.S.
Ammonium Chloride (25% Solution)	Q.S.

**Procedure:**

1. Add the ingredients in order. Mix until uniform between additions.
2. Adjust pH with the Citric Acid.
3. Adjust viscosity with the Sodium Chloride.

**Three in One Shampoo**  
(Cleansing, Conditioning and Shine)

<b><u>Ingredients:</u></b>	<b><u>% w/w</u></b>
Tetrasodium EDTA	0.1
Water	44.8
Ammonium Laureth Sulfate (30%)	35.0
Ammonium Lauryl Sulfate (30%)	10.0
Cocamidopropyl Betaine (Tego Betaine L-7)	7.0
Dimethicone Propyl PG-Betaine (Abil B 9950)	0.6
Dimethicone Copolyol (Abil B 8852)	0.6
Dimethicone Copolyol (Abil B 88183)	0.3
Cetyl Dimethicone Copolyol (Abil EM-90)	0.6
Citric Acid	to pH 6.5
Fragrance	Q.S.
Color	Q.S.
Preservative	Q.S.
PEG-18 Glyceryl Oleate/Cocoate (Antil 171)	1.0
Ammonium Chloride (25% solution)	As needed to adjust viscosity

**Procedure:**

1. Dissolve the Tetrasodium EDTA in the water.
2. Add ingredients in order, mixing between additions. Avoid air entrapment.
3. Slowly mix in the PEG-18 Glyceryl Oleate/Cocoate.
4. Adjust viscosity with the 25% solution of Ammonium Chloride.

**SOURCE:** Goldschmidt Chemical Corp.: Suggested Formulations

**Extra Mild Pearlized Shampoo**

A low actives lotion shampoo which is made milder by the Grilloten LSE 87 K, which also reduces sting. Contains Panthenol for thickening and strengthening the hair fibers.

**Ingredients:**

	% W/W
1. Distilled Water	54.84
2. Sodium Lauryl Sulfate (28%)	22.86
3. Sodium C14-16 Olefin Sulfate (40%)	5.00
4. Lauramide DEA	4.00
5. Ritabate 20	3.00
6. dl-Panthenol	0.50
7. Methylparaben	0.10
8. Grilloten LSE 87K	3.00
9. Rita EGMS	2.50
10. Sodium Chloride (25% Solution)	
(or to desired viscosity)	4.00
11. Color	QS
12. Fragrance	QS
13. Glydant	0.20

**Compounding Procedure:**

Heat water to 70C. Add ingredients in order for items 2-8, bringing temperature back to 70C after each addition and stir until clear. Cool stirred mixture to 40C. Add remaining ingredients, except Sodium Chloride. Mix until uniform. Add Sodium Chloride solution to adjust viscosity.

Formulation HB-89-PA-9

**Cold Process Pearlized Shampoo**

A viscous shampoo which can be made without heating. Ritasynt CBE blend is used as a thickener and conditioner.

**Ingredients:**

	% W/W
<b>Part A:</b>	
1. Lauramide DEA	5.00
2. Perfume	0.20
3. Pationic ISL	3.00
4. Methylparaben	0.10
<b>Part B:</b>	
5. Distilled Water	39.15
6. Alpha Olefin Sulfate	41.00
7. Kathon CG	0.05
<b>Part C:</b>	
8. Ritasynt CBE Blend	9.00
<b>Part D:</b>	
9. Patlac LA (44%)	0.50
10. Sodium Chloride (25% Solution)	2.00

**Compounding Procedure:**

Weigh Lauramide DEA, add perfume and mix until uniform. Add Pationic ISL and mix until uniform. Add Methylparaben and mix until uniform. Add Part A to Part B with mixing and mix until consistent. Add Part C. Adjust pH with Patlac LA (pH 5.5-6.5 recommended). Adjust viscosity with Sodium Chloride solution.

Formulation 103-61

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Family Shampoo

<u>Ingredient:</u>		<u>Wt. %</u>
Deionized Water		40.0
Hydroxypropyl Methylcellulose	Methocel 40-100	0.7
Triethanolamine		0.1
Ammonium Lauryl Sulfate	Mazon AL-300	45.0
Cocamidopropyl Betaine	Mafo CAB	7.0
Lauramine Oxide	Mazox LDA	6.0
Dimethicone Copolyol	Masil 280 LP	0.5
Fragrance		0.3
Preservative, EDTA		0.4
Citric Acid		Q.S.

pH: 6.0-6.5

Viscosity: 2,100 cps

Appearance: Clear, straw-colored liquid

Procedure:

This is an economical, room-temperature process requiring only one vessel. Disperse the hydroxypropyl methylcellulose in the water; then add the triethanolamine to initiate hydration. Add the Mazon AL-300, Mafo CAB, and Mazox LDA. When uniform, add the Masil 280 LP and fragrance (these can be pre-mixed to speed dissolution of the fragrance in the batch). Add the preservative and EDTA, and adjust the pH.

SOURCE: PPG Industries, Inc.: Formulation A-102

Zinc Pyrithione Containing Shampoo\*

<u>Phase</u>	<u>Ingredients:</u>	<u>% by Weight</u>
A	Water, Deionized	66.58
A	Aculyn 33	6.67
A	Sodium Hydroxide, 50%	0.75
A	Oramix NS10	13.5
A	Monteine LCQ	8.5
A	Simulso! 220 TM	3.0
A	Zinc Omadine	1.0
A	Preservative	QS

pH: 7

Viscosity: 32,700 cps

\* Not clinically tested

Add ingredients in order listed (very important), adjust to pH7

This mild shampoo containing an anti-dandruff agent made with Aculyn 33 exhibits very good stability at room temperature and in low-temperature or high-temperature (4C/40C) studies. In addition, Aculyn 33 polymer is easily used in the manufacturing process because it is a liquid emulsion.

: Rohm and Haas Co.: Suggested Formulation

Gel Shampoo

<u>Ingredients:</u>	<u>% by Weight</u>
Steol CS-460	14.0
Amphosol CA	4.5
Ninol 40-CO	4.0
Ninol 201	2.5
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Sodium chloride	Q.S.
D.I. Water	Q.S. to 100

Mixing Procedure:

Heat D.I. water to 55C and add first four components. Mix until homogeneous. Cool to 40C with mixing. Adjust pH to 6.0-7.0 with citric acid. Add fragrance, dye and preservative if desired. Adjust to desired viscosity with sodium chloride. Allow product to deaerate before filling.

Typical Properties:

Yellow clear gel

Viscosity Profile:

0% Sodium chloride: 200 cps

0.5% Sodium chloride: 5500 cps

1.0% Sodium chloride: 11300 cps

Passed F/T

Formulation No. 379

Gel Shampoo

<u>Ingredients:</u>	<u>% by Weight</u>
Bio-Terge AS-40	20.00
Amphosol CA	10.00
Ninol 40-CO	4.00
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Sodium chloride	Q.S.
D.I. water	Q.S. to 100

Mixing Procedure:

Add first three components to water and heat to 50C. Adjust pH to 6.0-7.0 with citric acid. Add fragrance, dye and preservative, if desired. Cool to desired filling temperature. Adjust to desired viscosity with sodium chloride.

Physical Attributes:

Yellow semi-viscous liquid

pH (as is): 6.0-7.0

Passed three freeze/thaw cycles and two weeks at 50C

Viscosity Profile: as is: 510 cps

0.5% sodium chloride: 4,200 cps

1.0% sodium chloride: 7,475 cps

2.0% sodium chloride: 17,400 cps

SOURCE: Stepan Co.: Formulation No. 406

**Gel Shampoo**  
**15.0% Active**

A high viscosity shampoo which has good cleaning properties.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Standapol ES-2	54.35
2. Distilled Water	39.50
3. Methylparaben	0.15
4. Ritacomplex B	4.00
Part B:	
5. Sodium Chloride	0.25
Part C:	
6. dl-Panthenol	0.25
7. Laneto 50	0.75
8. Merquat 550 (optional)	0.50
Part D:	
9. Perfume	0.20
10. Kathon CG	0.05
Part E:	
11. Sodium Chloride (25% Solution)	QS

**Compounding Procedure:**

Heat Part A and Part C to 165F. When Part A reaches temperature, add Part B with mixing. Continue mixing, add Part C. Cool to 120F and add Part D. Adjust viscosity with Part E.

Initial Viscosity: 3,000 cps

Adjusted Viscosity: 9,000 cps

Formulation 102-19

**Gelled Alkaline Shampoo**  
**A Shampoo with Alkaline pH**

Alkaline shampoo for use after resin hold products.

<u>Ingredients:</u>	<u>% W/W</u>
1. Sodium Laureth Sulfate CS-230	50.00
2. Distilled Water	34.65
3. Ritasynt IP	4.50
4. Pationic ISL	3.00
5. Laneto 50	1.50
6. dl-Panthenol	0.50
7. Methylparaben	0.10
8. Ritapeg 150 DS	2.00
9. Perfume	+0.10
10. Kathon CG	+0.05
11. Sodium Hydroxide (20% Solution)	+0.60
12. Sodium Chloride (25% Solution)	+3.00

**Compounding Procedure:**

Heat items 1-8 to 165F. Mix, cool to 120F. Add Kathon CG and perfume. Adjust pH with Sodium Hydroxide solution. Adjust viscosity with Sodium Chloride solution.

Formulation 103-2

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Glossing Shampoo

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Water	50.6
Tetrasodium EDTA	0.1
Sodium Lauryl Sulfate	20.0
Sodium Laureth Sulfate	20.0
PEG-18 Glyceryl Oleate/Cocoate (Antil 171)	1.0
Cocamidopropyl Betaine (Tego Betaine L-7)	7.0

Phase B:	
Dimethicone Copolyol (Abil B 8851)	0.8
Cetyl Dimethicone Copolyol (Abil EM-90)	0.5
Citric Acid	To pH 6.5

Phase C:	
Color, Preservatives, Fragrance	Q.S.
Sodium Chloride	As Needed

Procedure:

1. Dissolve the Tetrasodium EDTA in the water.
  2. Add ingredients in order, mixing between additions. Avoid air entrapment.
  3. Slowly mix in the PEG-18 Glyceryl Glycol Dioleococoate.
  4. Adjust viscosity with the 25% solution of Ammonium Chloride.
- Note: For manufacturing ease, a 25% solution of Ammonium Chloride can be made.
- Note: SLS/SLES and Sodium Chloride may be substituted for the ALS/ALES and Ammonium Chloride.

SOURCE: Goldschmidt Chemical Corp.: Suggested Formulation

Shampoo

Ammonium lauryl sulfate	20.0
Lexate BPQ (Lauramidopropyl Betaine (and) TEA-Coco-Hydrolyzed Animal Protein (and) Oleamidopropyl Dihydroxypropyl Dimonium Chloride)	15.0
Deionized water	41.7
Propylene glycol	3.0
Lexgard M (Methylparaben)	0.2
Lexgard <sup>CP</sup> (Propylparaben)	0.1
Citric acid	to pH 6.0+-2.0

Procedure:

Combine ingredients with mixing. Adjust pH.

SOURCE: Inolex Chemical Co.: Suggested Formulation

### Hair Repair Shampoo (Shampoo for Damaged Hair)

<u>Ingredients:</u>	<u>% w/w</u>
Tetrasodium EDTA	0.1
Water	60.5
Ammonium Lauryl Sulfate	10.0
Ammonium Laureth Sulfate (2M E.O.)	20.0
PEG-18 Glyceryl Oleate/Cocoate (Antil 171)	1.5
Cocamidopropyl Betaine (Tego Betaine L-7)	5.0
Dimethicone Copolyol (Abil B 8851)	0.5
Propylene Glycol	1.0
Dimethicone/Sodium Poly PG-Propyl Dimethicone	
Thiosulfate Copolymer (Abil S 201)	1.0
Quaternium-80 (Abil Quat 3272)	0.4
Color	Q.S.
Fragrance	Q.S.
Preservatives	Q.S.
Citric Acid	to pH 6.5
Ammonium Chloride	Q.S.

**Procedure:**

1. Dissolve the Tetrasodium EDTA in the water.
  2. Add ingredients in order, mixing between additions. Avoid air entrapment.
  3. Slowly mix in the PEG-18 Glyceryl Glycol Dioleococoate.
  4. Adjust viscosity with the 25% solution of Ammonium Chloride.
- Note: For manufacturing ease, a 25% solution of Ammonium Chloride can be made.
- Note: SLS/SLES and Sodium Chloride may be substituted for the ALS/ALES and Ammonium Chloride.

### Shampoo for Dyed and Permed Hair

<u>Ingredients:</u>	<u>% w/w</u>
Tetrasodium EDTA	0.1
Water	61.8
Ammonium Lauryl Sulfate	10.0
Ammonium Laureth Sulfate (2M E.O.)	20.0
PEG-18 Glyceryl Oleate/Cocoate (Antil 171)	1.2
Dimethicone Propyl PEG-Betaine (Abil B 9950)	1.5
Dimethicone Copolyol (Abil B 88183)	0.4
Cocamidopropyl Betaine (Tego Betaine L-7)	4.0
Color	Q.S.
Fragrance	Q.S.
Preservatives	Q.S.
Citric Acid	to pH 6.5
Ammonium Chloride	1.0

**Procedure:**

1. Dissolve the Tetrasodium EDTA in the water.
  2. Add ingredients in order, mixing between additions. Avoid air entrapment.
  3. Slowly mix in the PEG-18 Glyceryl Glycol Dioleococoate.
  4. Adjust viscosity with the 25% solution of Ammonium Chloride.
- Note: For manufacturing ease, a 25% solution can of Ammonium Chloride can be made.
- Note: SLS/SLES and Sodium Chloride may be substituted for the ALS/ALES and Ammonium Chloride.

**SOURCE:** Goldschmidt Chemical Co.: Suggested Formulations



High Active Clear Gel Shampoo

<u>Ingredients:</u>	<u>% by Weight</u>
Steol CS-130	75.0
Amphosol CA	6.6
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Sodium chloride	Q.S.
D.I. water	Q.S. to 100

Mixing Procedure:

To D.I. water, add Steol CS-130 and Amphosol CG, mixing well after each addition. Adjust pH to 6.5-7.5 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with sodium chloride.

Physical Attributes:

Clear, yellow liquid  
 pH (as is): 6.5-7.5  
 Passed freeze thaw study  
 Viscosity: 0.5% sodium chloride: 34,250 cps  
 Formulation No. 395

Low pH Gel Shampoo

<u>Ingredients</u>	<u>% by Weight</u>
Bio-Terge AS-40	22.0
Amphosol CA	14.0
Ammonyx CDO	5.0
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
D.I. water	Q.S. to 100

Mixing Procedure:

Add first three components to D.I. water and heat to 50C. Adjust pH to 4.0-5.0 with citric acid. Cool to 40C and add fragrance, dye and preservative, if desired.

Physical Properties:

Yellow, semi-viscous gel  
 Viscosity: as is: 2,550 cps  
                   0.5% sodium chloride: 19,600 cps  
 Passed three freeze thaw cycles  
 Passed two weeks stability at 50C

SOURCE: Stepan Co.: Formulation No. 422

**Improved Combing Conditioning Shampoo**

<b><u>Ingredients:</u></b>	<b><u>% w/w</u></b>
Water	49.0
Ammonium Laureth Sulfate (30%)	30.0
Ammonium Lauryl Sulfate (30%)	10.0
PEG-18 Glyceryl Oleate/Cocoate (Antil 171)	1.5
Cocamidopropyl Betaine (Tego Betaine L-7)	7.0
Dimethicone Copolyol (Abil B 8852)	0.5
Dimethicone Copolyol (Abil B 88183)	0.5
Cetyl Dimethicone Copolyol (Abil EM-90)	0.5
Ammonium Chloride	1.0
Fragrance	Q.S.
Color	Q.S.
Preservative	Q.S.

**Procedure:**

1. Dissolve the Tetrasodium EDTA in the water.
2. Add ingredients in order, mixing between additions. Avoid air entrapment.
3. Slowly mix in the PEG-18 Glyceryl Oleate/Cocoate.
4. Adjust viscosity with the 25% solution of Ammonium Chloride.

Note: For manufacturing ease, a 25% solution of Ammonium Chloride can be made.

Note: SLS/SLES and Sodium Chloride may be substituted for the ALS/ALES and Ammonium Chloride.

**Soft Highlights--Conditioning Shampoo**

<b><u>Ingredients:</u></b>	<b><u>% w/w</u></b>
Water	44.7
Ammonium Laureth Sulfate (30%)	35.0
Ammonium Lauryl Sulfate (30%)	10.0
PEG-18 Glyceryl Oleate/Cocoate (Antil 171)	1.0
Cocamidopropyl Betaine (Tego Betaine L-7)	7.0
Cetyl Dimethicone (Abil Wax 9801)	0.3
Dimethicone Copolyol (Abil B 8852)	0.6
Cetyl Dimethicone Copolyol (Abil EM-90)	0.4
Ammonium Chloride	1.0
Fragrance	Q.S.
Color	Q.S.
Preservative	Q.S.

**Procedure:**

1. Dissolve the Tetrasodium EDTA in the water.
2. Add ingredient in order. Mixing between additions. Avoid air entrapment.
3. Slowly mix in the PEG-18 Glyceryl Glycol Dioleococoate.
4. Adjust viscosity with the 25% solution of Ammonium Chloride.

Note: For manufacturing ease, a 25% solution of Ammonium Chloride can be made.

Note: SLS/SLES and Sodium Chloride may be substituted for the ALS/ALES and Ammonium Chloride.

**SOURCE:** Goldschmidt Chemical Corp.: Suggested Formulations

Low Cost Clear Shampoo

<u>Ingredients:</u>	<u>Percent by Weight</u>
Water (20C or cooler), q.s.	65.54
Dowicil 200 preservative	0.10
Methocel 40-100	0.90
Versene 100 (EDTA)	0.11
Ammonium lauryl sulfate (28% active)	28.40
Coco-diethanolamide (liquid)	4.00
Citric acid	0.20
Sodium chloride	0.75

**Note:**

Alternately, one could use Methocel 40-202 at 1.3% for an exceptionally clear shampoo. Any alkali source will suffice to activate surface treated Methocel products. Other examples include alkanolamines, aminomethylpropane, or dilute sodium hydroxide. Methocel hydroxypropyl methylcellulose not only provides thickening, but also contributes to production of luxurious and stable foam.

**Procedure:**

This is a cold process shampoo, no heating required.

1. Add the indicated cool water to a stirred vessel and dissolve the Dowicil 200 preservative.
2. Mix in the thickener, Methocel 40-100 hydroxypropyl methylcellulose surface treated powder, and activate it by adding liquid Versene 100, an alkaline EDTA chelating agent for water hardness ion control.
3. Continue mixing at low to moderate speeds to minimize foaming and to enable hydration of the Methocel 40-100. The resulting solution should thicken and turn clear.
4. At this point, one can blend in the surfactants and fatty amide followed by citric acid and salt to adjust final pH and viscosity.
5. Fragrance can be added anytime after the surfactant addition. Alternately, one could use Methocel 40-202 at 1.3% for an exceptionally clear shampoo.

SOURCE: Dow Chemical Co.: Suggested Formulation

High Performance Shampoo

	<u>% by Weight</u>	<u>% Active</u>
Monamate LA-100	9.5%	8.1
Monateric LMM-30	20.0%	6.0
AOS (40%)	15.0%	6.0
Water	55.0%	---

Adjust pH to 5.0

Mix with heat until clear. Cool. Adjust pH.

This shampoo has good viscosity, is crystal clear, non-irritating, and provides an abundance of luxurious lather which cleans hair without stripping.

SOURCE: Mona Industries, Inc.: Suggested Formulation

Low Cost Clear Shampoo (Cold Process)

<u>Ingredients:</u>	<u>Percent by Weight</u>
Dowicil 200 preservative	0.10
Methocel 40-202	1.30
Versene 100 (EDTA)	0.11
Ammonium lauryl sulfate (28% active)	28.40
Coco-diethanolamide (liquid)	4.00
Citric acid	0.20
Ammonium chloride	0.40
Water (20C or colder), q.s.	65.49

**Note:**

Any alkali source will suffice to activate surface treated Methocel products. Other examples include alkanolamines, amino-methylpropanol, or dilute sodium hydroxide. Methocel hydroxypropyl methylcellulose not only provides thickening, but also contributes to production of luxurious and stable foam, with excellent lubricity.

**Procedure:**

1. This is a cold process shampoo, no heating required. Add the indicated cool water to a stirred vessel and dissolve the Dowicil 200 preservative.
2. Mix in the thickener, Methocel 40-202 hydroxypropyl methylcellulose surface treated powder, and activate it by adding liquid Versene 100, an alkaline EDTA chelating agent for water hardness ion control.
3. Continue mixing at low to moderate speeds to minimize foaming and to enable hydration of the Methocel 40-202. The resulting solution will thicken and turn clear.
4. At this point, one can blend in the surfactants and fatty amide followed by citric acid and salt to adjust final pH and viscosity.
5. Fragrance can be added anytime after the surfactant addition.

SOURCE: Dow Chemical Co.: Suggested Formulation

Luxurious Shampoo with Soap-Like Feel

The following formula develops excellent lather with a rich soap-like feel and leaves the hair soft and manageable.

	<u>% By Weight</u>	<u>% Active</u>
Water and Preservative	39.0	---
Monamate LNT-40	12.0	4.75
Monamate C-1142	12.0	4.75
Monateric 985A	35.0	12.20
Monamid 1089	2.0	2.00

Add ingredients in order listed and blend until homogeneous.

Adjust pH level to 5.5 Viscosity: approximately 2500 cps.

SOURCE: Mona Industries, Inc.: Suggested Formulation

Low Irritation/Sting Shampoo

A shampoo which has good cleaning properties with proven low irritancy and characteristics.

Ingredients:

% W/W

## Part A:

1. Distilled Water	64.08
2. Sodium Laureth Sulfate (2 Mole)	16.67
3. Pationic 138C	10.00
4. Ritamid C	3.00
5. Monaquat TG	0.50
6. dl-Panthenol	0.50
7. Methylparaben	0.10

## Part B:

8. Triethanolamine (50%)	+2.00
--------------------------	-------

## Part C:

9. Perfume	0.20
10. Glydant 40-700	0.20

## Part D:

11. Sodium Chloride (25% Solution)	2.75
------------------------------------	------

Compounding Procedure:

Heat A to 165F. While mixing, adjust pH to 7.5 with B. Cool to 120F. Add C. Cool to 90F. Adjust viscosity with Sodium Chloride 25% Solution.

Formulation 107-117

Low Irritation Shampoo

A shampoo which has good cleaning properties, yet is proven to have low irritation characteristics. The hair is left soft and manageable due to the use of Pationic 138C and the cationic surfactant Monaquat PTS.

Ingredients:

% W/W

## Part A:

1. Distilled Water	64.08
2. Sodium Laureth Sulfate (2 Mole)	16.67
3. Pationic 138C	10.00
4. Ritamid C	3.00
5. Methylparaben	0.10
6. Monaquat PTS	0.50
7. dl-Panthenol	0.50

## Part B:

8. Triethanolamine (50%)	2.00
--------------------------	------

## Part C:

9. Perfume	0.20
10. Glydant 40-700	0.20

## Part D:

11. Sodium Chloride (25% Solution)	2.75
------------------------------------	------

Compounding Procedure:

Heat A to 165F. While mixing, neutralize to 7.5 with B. Cool to 120F. Add C. Adjust viscosity with Sodium Chloride 25% solution.

Formulation 107-118

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Low Sting Shampoo

A shampoo which has good cleaning properties, yet is proven to be mild.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Pationic 138C	7.50
2. Hamposyl TL 40	18.75
3. Ritapeg 150 DS	2.00
4. Distilled Water	69.32
5. Methyl Parahydroxybenzoate	0.15
Part B:	
6. Potassium Hydroxide (10% Solution)	QS
Part C:	
7. Kathon CG	0.03
8. Perfume	0.25
Part D:	
9. Potassium Chloride (25% Solution)	2.00

Compounding Procedures:

Gently heat Part A with mixing to 165F. Mix until uniform. Begin cooling. Cool to 120F. Check pH. Add/QS amount of Potassium Hydroxide solution to adjust pH up to 7.5. Add perfume and preservative. Cool to 90F. Add Potassium Chloride to adjust viscosity (if needed-3,000 to 4,000 cps seems desirable). Add back water to 100% to compensate for moisture loss.

Low Sting Shampoo

A shampoo which has good cleaning properties, yet is proven to be mild.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Hamposyl TL 40	37.50
2. Ritapeg 150 DS	4.00
3. Distilled Water	56.07
4. Methyl Parahydroxybenzoate	0.15
Part B:	
5. Potassium Hydroxide (10% Solution)	QS
Part C:	
6. Perfume	0.25
7. Kathon CG	0.03
Part D:	
8. Potassium Chloride (25% Solution)	+/-2.00

Compounding Procedure:

Gently heat Part A with mixing to 165F. Mix until uniform. Begin cooling. Cool to 120F. Check pH. Add/QS amount of Potassium Hydroxide solution to adjust pH up to 7.5. Add perfume and preservative. Cool to 90F. Add Potassium Chloride to adjust viscosity (if needed-3,000 to 4,000 cps seems desirable). Add back water to 100% to compensate for moisture loss.

SOURCE: R.I.T.A. Corp.; Suggested Formulations

Low Sting Shampoo

A shampoo which has good cleaning properties, yet is proven to be mild.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Pationic 138C	7.50
2. Hamposyl L	7.50
3. Ritapeg 150 DS	2.00
4. Distilled Water	80.57
5. Methyl Parahydroxybenzoate	0.15
Part B:	
6. Potassium Hydroxide (10% Solution)	QS
Part C:	
7. Perfume	0.25
8. Kathon CG	0.03
Part D:	
9. Potassium Chloride (25% Solution)	2.00

Compounding Procedure:

Gently heat Part A with mixing to 165F. Mix until uniform. Begin cooling. Cool to 120F. Check pH. Add/QS amount of Potassium Hydroxide solution to adjust pH up to 7.5. Add perfume and preservative. Cool to 90F. Add Potassium Chloride to adjust viscosity (if needed-3,000-4,000 cps seems desirable). Add back water to 100% to compensate for moisture loss.

Low Sting Shampoo

A shampoo which has good cleaning properties, yet is proven to be mild.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Hamposyl L	15.00
2. Distilled Water	78.57
3. Ritapeg 150 DS	4.00
4. Methyl Parahydroxybenzoate	0.15
Part B:	
5. Potassium Hydroxide (10% Solution)	QS
Part C:	
6. Perfume	0.25
7. Kathon CG	0.03
Part D:	
8. Potassium Chloride (25% Solution)	2.00

Compounding Procedure:

Gently heat Part A to 165F with agitation. Mix until uniform. Hold at 165F. Add Potassium Hydroxide solution to pH 7.5. Begin cooling. Cool to 120F. Recheck pH and adjust if necessary. Add perfume and preservative. Cool to 80F. Add Potassium Chloride to adjust viscosity (if needed-3,000 to 4,000 cps seems desirable). Add back water to 100% to compensate for moisture loss.

Low Sting Shampoo

A low actives content shampoo with reduced irritation and sting because of the Grilloten LSE 87. Viscosity is adjusted by the use of lauramide, Ritapeg 150DS and salt solution. Panthenol is used to thicken and strengthen the hair fibers and improve luster.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	52.90
2. Sodium Lauryl Ether Sulfate (28%)	30.00
3. Lauramide DEA	5.00
4. Ritapeg 150 DS	2.00
5. Ritabate 20	2.00
6. dl-Panthenol	0.50
7. Methylparaben	0.10
8. Grilloten LSE 87	3.00
9. Color	QS
10. Sodium Chloride (25% Solution) (or to desired viscosity)	4.00
11. Patlac LA (44%)	0.50
12. Fragrance	QS

Compounding Procedure:

Heat water to 70C. Add ingredients in order for items 2-9, bringing temperature back to 70C after each addition and stir until clear. Cool to 40C. Add Patlac LA to adjust pH between 6.5 to 7.0. Add remaining ingredients, except salt solution. Adjust viscosity with salt solution.

Formulation HB-89-PA-10

Low Sting Shampoo

A shampoo which has good cleaning properties, yet is proven to be mild.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Pationic 138C	15.00
2. Distilled Water	78.57
3. Ritapeg 150 DS	4.00
4. Methylparaben	0.15
Part B:	
5. Potassium Hydroxide (10% Solution)	QS
Part C:	
6. Perfume	0.25
7. Kathon CG	0.03
Part D:	
8. Potassium Chloride (25% Solution)	2.00

Compounding Procedure:

Gently heat Part A with mixing to 165F. Mix until uniform. Hold at 165F. Add Potassium Hydroxide solution to pH 7.5. Begin cooling. Cool to 120F. Recheck pH and adjust if necessary. Cool to 80F. Add Potassium Chloride to increase viscosity (if needed-3,000 to 4,000 cps seems desirable). Add back water to 100% to compensate for moisture loss.

SOURCE: R.I.T.A. Corp.; Suggested Formulations



**Maximum Conditioning Shampoo**

<u>Ingredients:</u>	<u>% w/w</u>
Tetrasodium EDTA	0.1
Water	44.3
Ammonium Lauryl Sulfate	18.0
Ammonium Laureth Sulfate (2M. E.O.)	25.0
Cocamidopropyl Betaine (Tego Betaine L-7)	6.0
PEG-7 Glyceryl Cocoate (Tegosoft GC)	3.0
Dimethicone Copolyol (Abil B 88183)	0.4
Dimethicone Copolyol (Abil B 8852)	0.6
Cetyl Dimethicone Copolyol (Abil EM-90)	0.6
Quaternium-80 (Abil Quat 3270)	0.3
Polyquaternium-7	0.5
Citric Acid	to pH 6.5
Fragrance	Q.S.
Color	Q.S.
Preservatives	Q.S.
PEG-18 Glyceryl Oleate/Cocoate (Antil 171)	1.2
Ammonium Chloride (25% solution) As needed to adjust viscosity	

**Procedure:**

1. Dissolve the Tetrasodium EDTA in the water.
2. Add ingredients in order, mixing between additions. Avoid air entrapment.
3. Slowly mix in the PEG-18 Glyceryl Oleate/Cocoate.
4. Adjust viscosity with the 25% solution of Ammonium Chloride.

**2:1 Conditioning Shampoo**

<u>Ingredients:</u>	<u>% w/w</u>
Water	48.6
Sodium Laureth Sulfate (28%)	40.0
PEG-7 Glyceryl Cocoate (Tegosoft GC)	3.0
Cetyl Dimethicone Copolyol (Abil EM-90)	0.6
Dimethicone Copolyol (Abil B 8852)	0.5
Polyquaternium-7	0.4
Quaternium-80 (Abil Quat 3270)	0.3
Cocamidopropyl Betaine (Tego Betaine L-7)	5.0
Citric Acid	to pH 6.5
Fragrance	Q.S.
Color	Q.S.
Preservative	Q.S.
PEG-18 Glyceryl Oleate/Cocoate (Antil 171)	1.6

**Procedure:**

1. Add the ingredients in order, mixing well between the additives.
2. Adjust pH with the Citric Acid.
3. Add the fragrance, color and preservatives. Mix well.
4. Add the Antil 171. Mix well avoiding air entrapment. Maximum viscosity is observed at 24 hours.

Note: Additional viscosity can be obtained by increasing the Antil 171 or by adding Sodium Chloride.

**Mild Shampoo**

<u>Ingredient:</u>		<u>Wt. %</u>
Deionized Water		62.2
Sodium Cocoyl Isethionate	Jordapon CI Dispersion	3.0
Ammonium Lauryl Sulfate	Mazon AL-300	25.0
Cocamidopropyl Hydroxysulfate	Mafo CAB-50	8.0
Methyl Paraben		0.2
Tetrasodium EDTA		0.2
Cocamide DEA	Mazamide JT-128	1.0
Fragrance		0.2
Imidazolidinyl Urea	Germall 115	0.2
Citric Acid		Q.S.

pH: 6.5-7.0

Viscosity: 5,000-8,000 cps (with 0 to 0.4% NaCl)

Appearance: Clear, straw-colored liquid

Foaming: Flash: 25 sec.

Half-life: 6 min., 19 sec.

Density: 45.1 gm/liter

**Procedure:**

Blend the first six ingredients. With mixing, heat the batch to 45C (115F). When uniform, add the Mazamide JT-128 and fragrance, cooling to 35C (95F). Add the imidazolidinyl urea and adjust the pH.

**Note:**

A pearlescent product will result if 0.75-1.5% Ethylene Glycol Monostearate or Ethylene Glycol Distearate (Mapeg EGMS, Mapeg EGDS) is added with the initial ingredients. Heat the batch to 60-65C (140-150F) to ensure complete dissolution of the pearl agent.

SOURCE: PPG Industries, Inc.: Formulation A-101

**Mild High Foaming Shampoo (28% active)**

The following formula is suggested as an everyday shampoo because of its mildness to the skin and eyes and gentleness to the hair. It has excellent flash-foaming properties and develops a dense soapy lather which rinses easily, leaving the hair soft and manageable.

	<u>% By Weight</u>
Water and Preservative	22.9
Monamate LNT-40	20.0
Monateric 985-A	57.1

**Procedure:**

Add ingredients in order listed. No heat is necessary.

Adjust pH to approximately 6.5.

Viscosity: approximately 1000 cp

SOURCE: Mona Industries, Inc.: Suggested Formulation

**Mild Conditioning Shampoo**

<u>Ingredients:</u>	<u>% by Weight</u>
Stepan-Mild LSB	29.0
Steol CS-330	22.0
Amphosol CA	14.0
Ninol 40-CO	2.0
Dimethicone copolyol	0.5
Sodium chloride	Q.S.
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Deionized water	Q.S. to 100

**Mixing Procedure:**

Add first five ingredients to water and mix well. Adjust pH to 6.0-7.0 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with sodium chloride.

**Physical Attributes:**

Clear yellow liquid

pH (as is): 6.0-7.0

Passed three freeze thaw cycles

Passed two weeks of stability at 50C

**Viscosity Profile:**

as is: 800 cps                      0.5% sodium chloride: 830 cps

1.0% sodium chloride: 970 cps   2.0% sodium chloride: 1,200 cps

**Comment:** Mild shampoo that cleans and conditions

Formulation No. 537

**Mild Conditioning Shampoo**

<u>Ingredients:</u>	<u>% by Weight</u>
Steol CS-330	45.0
Ninol 55-LL	5.0
Amphosol CA	5.0
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Sodium chloride	Q.S.
D.I. Water	Q.S. to 100

**Mixing Procedure:**

Add the first three components with D.I. water and mix well. Adjust pH to 5.5-6.0 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to the desired viscosity with sodium chloride.

**Physical Properties:**

Clear liquid

pH (as is): 5.5-6.0

**Viscosity Profile:**

as is: 250 cps

0.5% sodium chloride: 250 cps

1.0% sodium chloride: 8,900 cps

2.0% sodium chloride: 19,550 cps

Passed three freeze thaw cycles

**SOURCE:** Stepan Co.; Formulation No. 344

**Neutralizer Shampoo**

For use after relaxer or hair straightener treatment. Will lay down the cuticle, and restore shine and pH balance.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Alpha Olefin Sulfonate (40% active)	37.50
2. Pationic ISL	3.00
3. Monamid 150-LMW-C	3.00
4. Perfume	0.30
5. Methylparaben	0.20
6. Distilled Water	56.00
7. Patlac LA (44%)	QS

**Compounding Procedure:**

Warm Lauric Myristic Diethanolamide to 140F maximum. Dissolve Pationic ISL and Methylparaben into the Amide. Combine AOS and water. Add Lactylate/Amide mixture to water/AOS. Mix until uniform. Adjust pH to 5.5 with Patlac LA (44%).

**Note:**

Viscosity may be increased by the use of 2-3% of Ritapeg 150 (PEG 6000 Distearate), which can be added to the Lactylate/Amide blend.

Formulation 105-15

**Pationic SSL Lotion Shampoo**

A conditioning shampoo which leaves hair soft and manageable.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Sodium Lauryl Sulfate	21.43
2. Sodium Lauryl Ether Sulfate (2 mole)	21.43
3. Kathon CG	0.03
4. Pationic SSL	3.00
5. Methylparaben	0.15
6. Distilled Water	45.56
7. Rita EDGS	3.50
Part B:	
8. Ritamid C	4.50
Part C:	
9. Perfume (Finesse)	0.40
Part D:	
10. Patlac LA (44%)	QS
Part E:	
11. Sodium Chloride (25% Solution)	QS

**Compounding Procedure:**

Heat Part A to 160-165F with mixing. Mix until uniform. Allow to de-aerate before cooling. Begin cooling with mixing, cool to 140F. Add Part B, cool to 120F. Add Part C, cool to 80-85F. Adjust viscosity with Part E to 3,000-4,000 cps.

Formulation 105-128

SOURCE: R.I.T.A. Corp.; Suggested Formulations

Normal Hair Shampoo

A good, basic shampoo with excellent flash foam and lather which is dense and soft.

<u>Part</u>	<u>Ingredient:</u>	<u>Wt. %</u>
A	Demineralized Water	58.54
	Hydroxypropyl Methylcellulose Methocel 40-100	0.10
	Na4EDTA	0.20
	Triethanolamine	0.01
B	TEA Lauryl Sulfate	Sipon LT-6 22.50
	Methyl Paraben	0.20
	Imidazolidinyl Urea	Germall 115 0.20
	Ammonium Laureth Sulfate	Alfonic 1412-A 5.50
C	Ammonium Cocoyl Isethionate	Jordapon ACI-30 6.70
	Cocamide DEA	Mazamide 80 3.00
	Isostearamidopropyl Ethyl-	
	dimonium Ethosulfate	M-Quat 522 0.70
	Fragrance	0.10
	Citric Acid	0.25
	Ammonium Chloride	2.00

pH: 6.3-6.7

Viscosity: 5500-6000 cps

Appearance: Clear, straw-colored liquid

In the main vessel, disperse the hydroxypropyl methyl-cellulose in the water, mixing for ten minutes. Add the Na4EDTA and triethanolamine, which initiates hydration of the gum. Mix for about 20 minutes to ensure complete hydration, then add the part B ingredients in order given. When batch is clear and uniform, add the Mazamide 80 and the M-Quat 522, and fragrance, and adjust the pH and viscosity.

Formula A-108

Gel Shampoo

High-viscosity shampoo suitable for tube packaging. Mildness and foam lubricity are enhanced by Jordapon ACI-30 surfactant.

<u>Part:</u>	<u>Ingredient:</u>	<u>Wt. %</u>
A	Deionized Water	44.1
	Ammonium Lauryl Sulfate	Sipon L-22 31.0
	Ammonium Cocoyl Isethionate	Jordapon ACI-30 15.4
	Na4EDTA	0.2
	Methyl Paraben	0.2
	Imidazolidinyl Urea	Germall 115 0.2
B	Cocamidopropyl Betaine	Mafo CAB 5.8
	Cocamide DEA	Mazamide JT-128 1.5
	Lauric Acid	1.0
C	Fragrance	0.1
	Citric Acid	0.1
	Ammonium Chloride	0.4

pH: 6.3-6.7

Viscosity: 18,000-22,000 cps

Appearance: Clear, pale yellow viscous liquid

Mix the part A ingredients in the main vessel until uniform. In a separate vessel, premix part B, heating to 40C if necessary to dissolve all the lauric acid. Add B to A, mixing continuously. Adjust pH and viscosity with part C ingredients.

SOURCE: PPG Industries, Inc.: Formula A-109

**Pearlescent Shampoo**

	<u>% (w/w)</u>
Deionized Water	61.75
Sodium Lauryl Sulfate	30.00
Lexaine C (Cocamidopropyl Betaine)	6.00
Lexemul EGMS (Glycol Stearate)	1.00
Lexein X250 (Hydrolyzed Animal Protein)	1.00
Lexgard M (Methylparaben)	0.15
Lexgard P (Propylparaben)	0.05
Citric Acid	0.05
Sodium Chloride (to desired viscosity)	q.s.

**Procedure:**

Heat water to 70C. Add ingredients slowly with agitation to ensure complete dispersion. Adjust pH, cool to 40C. and fill. Full pearlescence develops within 24 hours.

**Observations:**

pH (direct): 6.0

Viscosity: 1,625 cps

Formulation SP-94

**Moisturizing Shampoo**

	<u>% (w/w)</u>
Deionized Water	53.60
Sodium Laurate Sulfate (30%)	25.00
Maypon 4C (Potassium Coco-Hydrolyzed Animal Protein)	10.00
Lexaine O (Oleamidopropyl Betaine)	5.00
Cocamide DEA	1.00
Propylene Glycol USP	3.00
Magnesium Aluminum Silicate	1.00
Hydroxypropyl Methyl Cellulose	1.20
Lexgard M (Methylparaben)	0.15
Lexgard P (Propylparaben)	0.05

**Procedure:**

Heat water to 70C. Disperse methyl cellulose and magnesium aluminum silicate. Add remaining ingredients and mix thoroughly. Cool to 40C and fill.

**Observations:**

pH (direct): 6.7

Viscosity: 2925 cps

SOURCE: Inolex Chemical Co.: Formulation SP-95

Pearlized Alkaline Shampoo

A shampoo with alkaline pH, formulated for effective removal of resin based sprays and sets. Viscosity is derived from the Ritasynt IP and Ritapeg 150 DS. Hair is left soft, with a pleasant after-feel, due to the inclusion of Pationic ISL.

<u>Ingredients:</u>	<u>% W/W</u>
1. Sodium Laureth Sulfate (2 Mole)	50.00
2. Distilled Water	38.58
3. Ritasynt IP	4.50
4. Pationic ISL	3.00
5. Laneto 50	1.50
6. dl-Panthenol	0.50
7. Methylparaben	0.10
8. Ritapeg 150 DS	0.50
9. Perfume	+0.10
10. Kathon CG	+0.05
11. Sodium Hydroxide (20% Solution)	+0.67
12. Sodium Chloride (25% Solution)	+0.50

Compounding Procedure:

Heat to 165F. Mix, cool to 120F. Add Kathon CG and perfume.  
Formulation 103-165

Pearlized Gel Shampoo

This shampoo has a beautiful pearly opaqueness and high viscosity due to the use of Rita Complex B and Rita EGMS.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Ritacomplex B	3.00
2. Rita EGMS	2.00
3. Sodium Laureth Sulfate	53.60
4. Distilled Water	37.20
5. Methylparaben	0.15
Part B:	
6. Distilled Water	0.25
7. dl-Panthenol	0.25
8. Laneto 50	0.75
9. Propylene Glycol	2.50
Part C:	
10. Perfume	0.20
11. Kathon CG	0.10

Compounding Procedure:

Weigh and heat Part A to 165F. Premix distilled water and dl-Panthenol and add to part A, add the balance of Part B to Part A. Cool to 120F, and add Part C.

Viscosity: 25,000 centipoises  
Formulation 107-13

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Pearlized Conditioning Shampoo

<u>Ingredients:</u>	<u>% by Weight</u>
Stepanol AM	40.0
Amphosol CA	5.0
Glycerine	3.0
Ninol 40-CO	2.0
Kessco Ethylene Glycol Monostearate Pure	2.0
Panthenol	0.1
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Ammonium Chloride	Q.S.
D.I. Water	Q.S. to 100

Mixing Procedure:

Combine the first five components with D.I. water and heat to 65C. Maintain temperature with mixing until the EGMS is completely melted. Cool to 35C with constant mixing. Adjust pH to 4.5-5.5 with citric acid. Blend in panthenol and mix well. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with ammonium chloride.

Physical Properties:

Pearly, white viscous liquid  
 Passed freeze thaw and elevated heat study  
 Viscosity profile: 0% sodium chloride: 2500 cps  
                           0.5% sodium chloride: 15,400 cps  
                           1.0% sodium chloride: 28,250 cps

pH (as is): 4.5-5.5

Formulation No. 377

Conditioning Shampoo

<u>Ingredients:</u>	<u>% by Weight</u>
Stepanol WAC	45.00
Ninol 55-LL	3.50
Quaternium 4	1.00
Kessco Ethylene Glycol Distearate	0.50
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Sodium chloride	Q.S.
D.I. water	Q.S. to 100

Mixing Procedure:

Disperse Quaternium 4 in water. Blend in Stepanol WAC, Ninol 50-LL and Kessco EGDS. Heat to 70C, mixing until the Kessco EGDS is completely melted. Cool to 30C. Adjust pH to 6-7 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with sodium chloride.

Physical Properties:

White, pearly liquid  
 Viscosity Profile: 0.5% sodium chloride: 4450 cps  
                           1.0% sodium chloride: 5650 cps  
                           2.0% sodium chloride: 14000 cps

Passed three day freeze thaw cycle and elevated heat study

SOURCE: Stepan Co.: Formulation No. 394



Pearlized Shampoo

A cold process pearlized shampoo with Animal Collagen and Grilloten LSE 87 Soft for conditioning and mildness.

<u>Ingredients:</u>	<u>% W/W</u>
1. Grilloten LSE 87K Soft	4.00
2. Distilled Water	15.00
3. Hydrolyzed Animal Collagen	1.50
4. Sodium Laureth Sulfate-40 Mole	30.00
5. Ritasynt-CB	20.00
6. Distilled Water	29.50
7. Preservative	QS
8. Perfume	QS
9. Sodium Chloride (25% Solution)	QS

Compounding Procedure:

Combine ingredients 1, 2 and 3. Mix until uniform (gentle heating will help). Add ingredients 4 and 6 to main mixer. Add ingredient 5 with agitation. Add preservative and perfume. Thicken with salt solution if desired.

Formulation H-89-G-18

Pearlized Shampoo

An opaque conditioning shampoo with reduced eye irritation.

<u>Ingredients:</u>	<u>% W/W</u>
1. Grilloten LSE 65K Soft	2.80
2. Distilled Water	43.20
3. Sodium Laureth Sulfate	40.00
4. Cocamidopropyl Betaine	8.00
5. Luviquat FC 500	1.00
6. Ritasynt IP	3.00
7. Sodium Chloride (25% Solution)	+2.00
8. Preservative, Perfume	QS

Compounding Procedure:

Combine ingredients 1 and 2 at room temperature. Begin heating with agitation. Heat to 165 to 170F. Add ingredient 3. Continue mixing and maintain temperature. Add ingredients 4, 5 and 6 while mixing. Maintain temperature. Examine for undissolved material. When uniform, begin cooling. Cool to 120F. Add perfume and preservative. Continue cooling. Adjust viscosity with salt solution.

Formulation H-89-G-19

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Pearlized Shampoo

A pearlized, conditioning, acid pH shampoo. Contains d1-Panthenol for hair thickness, repair and luster.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	68.20
2. Xanthan Gum	0.10
3. TEA Lauryl Sulfate	9.40
4. Sodium C14-16 olefin Sulfate	9.50
5. Ritamid C	5.50
6. Pationic ISL	2.50
7. Cocamidopropyl Betaine	1.40
8. Ritabate 20	0.50
9. Ritapeg-165	1.40
10. Stearic Acid	0.50
11. d1-Panthenol	1.00
12. Patlac LA (44%)	QS
13. Preservative	QS
14. Fragrance, Color	QS

Compounding Procedure:

Disperse item 2 into item 1. Heat to 75C. Add ingredients 3-11 with good agitation, maintaining 75C. When mixed well, begin cooling to 25C. Adjust pH to 6.0 with Patlac LA and add remaining ingredients.

Formulation HB-89-PA-12

Pearlized Shampoo

This shampoo has a beautiful pearly opaqueness with the use of Ritasynt IP. Viscosity is derived from the Ritasynt IP and Ritapeg 150 DS. Hair is left soft, with a pleasant after-feel, due to the inclusion of Pationic ISL.

<u>Ingredients:</u>	<u>% W/W</u>
<u>Part A:</u>	
1. Distilled Water	52.85
2. Sodium C14-16 Olefin Sulfonate	37.50
3. Methylparaben	0.10
<u>Part B:</u>	
4. Ritasynt IP	4.00
5. Pationic ISL	3.00
6. Ritapeg 150 DS	2.00
<u>Part C:</u>	
6. Perfume	0.10
7. Kathon CG	0.05
<u>Part D:</u>	
8. Sodium Hydroxide (18% Solution)	0.40
9. Sodium Chloride (25% Solution)	QS

Compounding Procedures:

Heat Part A and Part B to 180F. Add Part B to Part A with agitation and maintain heat for 10 minutes. Cool, with mixing to 120F and add Part C. Adjust pH to 7.0+/-0.1 with Sodium Hydroxide solution. Adjust viscosity with Sodium Chloride solution.

Formulation 103-28

SOURCE: R.I.T.A. Corp.: Suggested Formulations

**Premium Shampoo**

<u>Ingredients:</u>	<u>% by Weight</u>
Steol CS-330	45.0
Ninol 30-LL	4.0
Amphosol CG	1.0
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Sodium chloride	Q.S.
D.I. water	Q.S. to 100

**Mixing Procedure:**

Add first three components to D.I. water and mix until clear. Adjust pH to 6.0-7.0 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with sodium chloride.

**Physical Properties:**

Clear, yellow liquid

pH (as is): 6.0-7.0

Viscosity Profile: as is: 20 cps

0.5% sodium chloride: 450 cps

1.0% sodium chloride: 2,450 cps

2.0% sodium chloride: 32,650 cps

Passed three freeze thaw cycles

Stable for two weeks at 50C & six months at room temp.

Formulation No. 479

**Clear Gel Shampoo**

<u>Ingredients:</u>	<u>% by Weight</u>
Steol CS-130	60.0
Ninol 30-LL	5.0
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Sodium chloride	Q.S.
D.I. water	Q.S. to 100

**Mixing Procedure:**

Add Steol CS-130 and Ninol 30-LL to D.I. water. Mix until clear. Adjust pH to 6.0-7.0 with citric acid. Add fragrance, dye and preservative if desired. Adjust to desired viscosity with sodium chloride.

**Physical Properties:**

Clear light yellow gel

Viscosity: 19,000 cps @ 25C

Stable for two weeks at 50C

Passed three freeze thaw cycles

Stable at room temperature for six months

pH (as is): 6.0-7.0

SOURCE: Stepan Co.: Formulation No. 478

**Protein Shampoo**

	<u>%(w/w)</u>
Deionized Water	51.65
Sodium C14-16 Olefin Sulfonate (40%)	30.00
TEA Lauryl Sulfate	9.00
Lauramide DEA	3.50
Laxaine C (Cocamidopropyl Betaine)	3.50
Lexein X250 (Hydrolyzed Animal Protein)	2.00
Citric Acid	0.15
Lexgard M (Methylparaben)	0.15
Lexgrad P (Propylparaben)	0.05
Sodium Chloride (to desired viscosity)	q.s.

**Procedure:**

Heat water to 65°C. Disperse ingredients and agitate until clear. Adjust pH and fill.

**Observations:**

pH (direct): 5.0

Viscosity : 11,100 cps

Formulation SP-90

**Protein Enriched Shampoo**

	<u>%(w/w)</u>
Deionized Water	53.80
TEA Lauryl Sulfate (40%)	15.00
Ammonium Lauryl Sulfate (30%)	15.00
Cocamide DEA	5.00
Laxaine (Cocamidopropyl Betaine)	5.00
Maypon 4C (Potassium Coco-Hydrolyzed Animal Protein)	2.00
PVP/VA Copolymer	1.50
Ammonium Chloride	1.50
Lexein X250 (Hydrolyzed Animal Protein)	1.00
Lexgard M (Methylparaben)	0.15
Lexgard P (Propylparaben)	0.05

**Procedure:**

Heat water to 70°C. Slowly add ingredients and mix until clear. Adjust pH then fill.

**Observations:**

Adjusted pH (direct): 7.3 with citric acid

Viscosity: 1,300 cps

SOURCE: Inolex Chemical Co.: Formulation SP-88

**Protein Shampoo-Normal Hair**

<b><u>Ingredients:</u></b>	<b><u>% by Weight</u></b>
Stepanol AM-V	20.00
Stepanol WA-Extra	20.00
Ninol 40-CO	3.00
Hydroxypropyl methylcellulose	0.50
Hydrolyzed animal protein	0.50
Polyvinylpyrrolidone	0.20
Tetrasodium EDTA	0.10
Benzophenone-4	0.05
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Ammonium chloride	Q.S.
D.I. water	Q.S. to 100

**Mixing Procedure:**

Add hydroxypropyl methylcellulose to water per the manufacturing instructions. Add first eight components to water mixing well between each addition. Adjust pH to 6.0-6.5 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with ammonium chloride.

**Physical Properties:**

Clear liquid

pH (as is): 6.0-6.5

Freeze/thaw stable

Stable for two weeks at 50C

Viscosity Profile: as is: 100 cps

1.0% ammonium chloride: 14,800 cps

2.0% ammonium chloride: 24,050 cps

3.0% ammonium chloride: 22,300 cps

Formulation No. 148

**Mild Shampoo**

<b><u>Ingredients:</u></b>	<b><u>% by Weight</u></b>
Steol CS-130	30.0
Amphosol CA	20.0
Polysorbate 20	5.0
Kessco PEG 6000 Distearate	2.0
Sodium hydroxide	Q.S.
Fragrance, dye, preservative	Q.S.
Sodium chloride	Q.S.
D.I. water	Q.S. to 100

**Mixing Procedure:**

Add the Steol CS-130 and Kessco PEG 6000 Distearate to D.I. water. Heat to 60C and mix until the PEG 6000 Distearate is completely dispersed. Add the polysorbate 20 and Amphosol CA. Blend well and cool to 30C. Adjust pH to 6.5-7.0 with sodium hydroxide. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with sodium chloride.

**Physical Properties:**

Clear, yellow, liquid

Viscosity @ 25C: 25,500 cps

Passed three freeze/thaw cycles and one week at 50C

**Comment:**

Thick shampoo without using additional sodium chloride.

SOURCE: Stepan Co.: Formulation No. 409

Shampoo for Normal Hair

A viscous, clear, high foaming shampoo which conditions and adds body without buildup.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	+47.50
2. Sodium C14-16 Olefin Sulfate	20.00
3. Sodium Lauryl Sulfate	20.00
4. Ritamid C	3.00
5. Cocamidopropyl Betaine	3.00
6. Ritapeg 150 DS	2.00
7. Pationic ISL	2.50
8. Simchin WS	2.00
9. Patlac LA (44%)	QS
10. Sodium Chloride (25% Solution)	QS
11. Fragrance, color and preservatives	QS

Compounding Procedure:

Combine items 1 through 8 and heat to 165F. Mix until uniform. Begin cooling. Cool to 120F. Add fragrance, color and preservatives. Cool to 95F. Adjust pH to 5.5 with Patlac LA (lactic acid). After pH adjustment, adjust viscosity with salt solution. Do not exceed 1% salt (dry basis).

Formulation H-89-S-1

Conditioning Shampoo with Lactylate and Cationic

This clear shampoo has excellent cleaning properties, yet leaves the hair soft and manageable due to the use of Pationic ISL and Monaquat P-TS.

<u>Ingredients:</u>	<u>% W/W</u>
<u>Part A:</u>	
1. Distilled Water	49.95
2. Sodium Laureth Sulfate	40.00
3. Glydant 40-700	0.20
<u>Part B:</u>	
4. Monaquat P-TS	0.75
5. Distilled Water	2.25
<u>Part C:</u>	
6. Ritamid C	2.00
7. Perfume	0.30
8. Pationic ISL	3.00
9. Methylparaben	0.10
10. Propylparaben	0.05
<u>Part D:</u>	
11. Patlac LA (44%)	0.05
12. Sodium Chloride (25% Solution)	1.25
13. Color (1% Solution)	0.10

Compounding Procedure:

Combine Part A. Heat Part B slightly to produce a clear solution. Add to Part A. Combine Part C in order, blending after each addition. Add Part C to AB. Adjust pH to 6.5 with Patlac LA. Adjust viscosity with Sodium Chloride solution. Adjust color.

Formulation 103-108

SOURCE: R.I.T.A. Corp.; Suggested Formulations

Shampoo for Normal Hair

<u>Ingredients:</u>	<u>% by Weight</u>
Stepanol WAT	30.00
Ninol 40-CO	3.00
Hydroxypropyl methylcellulose	0.80
Tetrasodium EDTA	0.10
Benzophenone-4	0.05
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Ammonium chloride	Q.S.
D.I. water	Q.S. to 100

Mixing Procedure:

Add hydroxypropyl methylcellulose to D.I. water and mix until homogeneous. Add Stepanol WAT, Ninol 40-CO, tetrasodium EDTA, and benzophenone-4. Blend until clear. Adjust pH to 6.0-7.0 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with ammonium chloride.

Physical Properties:

Clear, yellow liquid

pH (as is): 6.0-7.0

Viscosity: as is: 550 cps

1.0% sodium chloride: 790 cps

Passed three freeze/thaw solid cycles

Stable at 50C for two weeks

Formulation No. 475

Salt Free Economy Shampoo

<u>Ingredients:</u>	<u>% by Weight</u>
Bio-Terge 804	15.0
Hydroxyethylcellulose	0.6
Fragrance, Dye, Preservative	Q.S.
D.I. Water	Q.S. to 100

Mixing Procedure:

Add hydroxyethylcellulose to D.I. Water and heat to 40C, mixing until completely dispersed. Add Bio-Terge 804 and blend until clear. Add fragrance, dye, and preservative, if desired. Viscosity may be modified by using more or less hydroxyethylcellulose.

SOURCE: Stepan Co.: Formulation No. 385

**Shampoo for Normal to Oily Hair**

	<u>%(w/w)</u>
Deionized Water	44.70
Ammonium Lauryl Sulfate	25.00
Lexaine O (Oleamidopropyl Betaine)	10.00
Coacamide DEA	10.00
Sodium C14-16 Olefin Sulfonate (40%)	4.00
Maypon 4CT (TEA-Coco-Hydrolyzed Animal Protein)	3.00
Propylene Glycol USP	3.00
Lexgard M (Methylparaben)	0.20
Lexgard P (Propylparaben)	0.10
Dye	q.s.
Fragrance	q.s.

**Procedure:**

Charge batch vessel with water and begin mixing and heating to 70C. Add the methylparaben and propylparaben and continue mixing. Add the propylene glycol. When the materials are completely dissolved begin cooling. At 40C, slowly add the rest of the materials with continued mixing. Adjust pH.

**Observations:**

pH (direct): 7.1 with citric acid

Viscosity: 1,400 cps

Formulation SP-110

**Shampoo for Oily Hair**

	<u>%(w/w)</u>
Deionized Water	44.80
Sodium Lauryl Sulfate	40.00
Maypon 4C (Potassium Coco-Hydrolyzed Animal Protein)	10.00
Lexaine C (Cocamidopropyl Betaine)	5.00
Lexgard M (Methylparaben)	0.15
Lexgard P (Propylparaben)	0.05
Dye	q.s.
Fragrance	q.s.
Citric Acid (to desired pH)	q.s.
Sodium Chloride (to desired viscosity)	q.s.

**Procedure:**

Heat water to 70C. Slowly add ingredients and mix until clear. Fill.

**Observations:**

pH (direct): 6.4

Viscosity: 125 cps

SOURCE: Inolex Chemical Co.: Formulation SP-99



Shampoo with Protein for Damaged Hair

Phase A:	% Weight
Water	49.30
Sorbitol	1.00
Glycol Stearate	1.00
Phase B:	
Cocamidopropylhydroxysultaine	20.00
Disodium Cocamido MIPA Sulfosuccinate	20.00
Sodium Lauroyl Sarcosinate	5.00
Phase C:	
Propyltrimonium Hydrolyzed Collagen (Protectein)	2.00
Phase D:	
Germaben II	1.00
Citric Acid	0.50
Fragrance	0.10
FD&C Yellow #5 (0.01% Solution)	0.10

**Procedure:**

Heat water to 80C, add Phase A in order listed. Mix until clear. Add Phase B ingredients in order and mix until homogeneous. Cool to room temperature. Add Protectein slowly, mix until smooth. Add Phase D ingredients and mix until uniform.

Lotion Shampoo with Protein

Phase A:	% Weight
Water	52.45
Tetrasodium EDTA	0.10
Polyquaternium-10	0.75
TEA Lauryl Sulfate	30.00
Glycol Stearate	1.50
Cocamide DEA	3.00
Phase B:	
Water	10.00
Hydrolyzed Animal Protein (Crotein SPA)	2.00
Phase C:	
Suttocide A, 50% Solution	0.20

**Procedure:**

Heat water to 70C. Add Phase A ingredients in order listed, mixing until homogeneous after each addition. Cool batch to 40C. Combine Phase B and add to batch. Add Phase C. Cool to room temperature and adjust pH to 6.3.

SOURCE: Sutton Laboratories: Suggested Formulation

**2 in 1 Conditioning Shampoo**

This two-in-one shampoo provides light conditioning without build-up during daily use.

<u>Materials:</u>	<u>Part/Wt(%)</u>
Part A:	
Steol CA-460 (ammonium laureth sulfate)	16.7
Ninol 30LL (lauramide DEA)	4.0
Part B:	
Water	76.9
Carbopol 1342 (acrylates/C10-C30 alkyl) (acrylate cross polymer)	0.8
Dowicil 200 (quaternium 15)	0.1
Part C:	
50% Solution Sodium Hydroxide	q.s.
Part D:	
SF1708-D1 (trimethylsilylamodimethicone)	1.5
Part E:	
Citric Acid	q.s.

**Procedure:**

- 1) Mix Part B ingredients until Carbopol 1342 is completely dissolved.
- 2) Add Part A to Part B with moderate agitation.
- 3) Add Part C to pH=7.5.
- 4) Add Part D slowly with moderate agitation.
- 5) Add Part E to pH=6.0.

Formulation HP202

**Clear Conditioning Shampoo**

<u>Materials:</u>	<u>Part/Wt(%)</u>
Part A:	
Steol CA-460 (ammonium laureth sulfate)	25.0
Ninol 30LL (lauramide DEA)	4.0
Part B:	
Water	67.3
Methocel 60HC (4000)	0.6
Kathon	0.1
Part C:	
SF1188	3.0
Color	q.s.
Perfume	q.s.
Part D:	
Citric Acid	q.s.

**Procedure:**

- 1) Mix Part B until Methocel is completely dissolved.
- 2) Add ingredients of Part A slowly with slow agitation to avoid air entrainment.
- 3) Add SF1188 also with very slow agitation. Then blend in perfume and color.
- 4) Adjust pH with Part D (citric acid) to 4.5.

Formulation HP204

**SOURCE:** GE Silicones: Suggested Formulations

2 in 1 Conditioning Shampoo

Viscasil 60M provides heavier conditioning to permed, bleached or other forms of difficult hair to condition.

<u>Materials:</u>	<u>Part/Wt(%)</u>
Part A:	
Steol CS330 (sodium laureth sulfate)	35.7
Ninol 40 CO (cocamide DEA)	4.0
Part B:	
Water	56.9
Carbopol 1382 (acrylates/C10-C30 alkyl acrylate cross polymer)	0.8
Kathon	0.1
Part C:	
50% Solution Sodium Hydroxide	q.s.
Part D:	
Viscasil 60M (dimethicone)	2.5
Part E:	
Citric Acid	q.s.

Procedure:

- 1) Mix Part B ingredients until Carbopol 1382 is completely dissolved.
- 2) Add Part A to Part B with moderate agitation.
- 3) Add Part C to pH=7.5.
- 4) Add Part D slowly with moderate agitation.
- 5) Add Part E to pH=6.0

SOURCE: GE Silicones: Formulation HP203

Shampoo with Protein

<u>Phase A:</u>	<u>% Weight</u>
TEA Lauryl Sulfate	25.00
Lauramide DEA	5.00
Cocoamphocarboxyglycinate (Miranol C2M-NP)	5.00
PEG-75 Lanolin, 50% (Solulan L-575)	3.00
Phase B:	
Water	57.30
Hydrolyzed Animal Protein (Crotein SPA)	4.50
Phase C:	
Suttocide A, 50% Solution	0.20

Procedure:

Combine Phase A ingredients in order listed while heating to 70C. When batch is homogeneous, cool to 45C. Combine Phase B and add to batch. Add Phase C and cool to room temperature with mixing. Adjust pH to 7.0.

SOURCE: Sutton Laboratories: Suggested Formulation

# **Section X**

## **Shaving Products**

**After Shave Lotion**  
**O/W Emulsion**

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Glyceryl Stearate (and) Ceteth-20 (Teginacid H)	4.0
Cetyl Dimethicone (Abil Wax 9801)	0.5
Stearyl Alcohol	1.8
Decyl Oleate (Tegosoft DO)	3.5
Caprylic/Capric Triglycerides (Tegosoft CT)	3.5
Isopropyl Myristate (Tegosoft M)	1.7
Phase B:	
Propylene Glycol	3.0
Water	72.0
Phase C:	
SD Alcohol 40A	10.0
Phase D:	
Fragrance	Q.S.
Preservatives	Q.S.
Procedure:	
1. Combine the ingredients of Phase A. Heat to 80C.	
2. Heat Phase B to 80C.	
3. Combine Phases A/B. Mix well. Cool to 60C. Homogenize.	
4. Cool with sweep mix until 40C.	
5. Add ethanol. Mix. Re-homogenize.	
6. Add remaining ingredients. Sweep mix to 25C.	

**W/O After Shave Lotion**

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Cetyl Dimethicone Copolyol (Abil EM-90)	2.0
Cyclomethicone (Abil B 8839)	20.0
Tocopherol Acetate	0.5
Fragrance	Q.S.
Phase B:	
Water	75.9
Sodium Chloride	0.5
Lactic Acid	0.1
Panthenol (50% ig)	1.0
Sodium Lactate (and) Sodium PCA (and) Glycine (and) Fructose (and) Urea (and) Niacinamide (and) Inositol (and) Sodium Benzoate (and) Lactic Acid (Lactil)	1.0
Preservatives	Q.S.
Procedure:	
1. Combine the ingredients of Phase A.	
2. Combine the ingredients of Phase B.	
3. Slowly add Phase B to Phase A with low energy stirring. At all times maintaining a milky appearance.	
4. Homogenize.	

SOURCE: Goldschmidt Chemical Corp.: Formulations

Shave Cream

<u>Ingredient:</u>		<u>Wt. %</u>
Deionized Water		76.9
Carbomer 934	Carbopol 934	0.2
Sodium Cocoyl Isethionate		
(and) Stearic Acid	Jordapon CI Flake	15.0
Propylene Glycol		5.0
PEG 75 Lanolin	Solulan 75	0.5
Preservative		0.2
Fragrance		0.2
Triethanolamine		2.0

Procedure:

Disperse and dissolve the Carbomer 934 in the water. Add the Jordapon CI Flake and heat to 45C (110F) to dissolve. Pre-mix the propylene glycol, PEG 75 lanolin, preservative, and fragrance; add this to the batch. Adjust pH to 7.0-7.5 with triethanolamine. Use this concentrate at 93%, with 7% Propellant A-47.

Formulation P-101

Shave Cream

Rich lather, good razor glide and no calcium soap scum

<u>Ingredient:</u>		<u>Wt. %</u>
Deionized Water		76.9
Carbomer 934	Carbopol 934	0.2
Sodium Cocoyl Isethionate		
(and) Stearic Acid	Jordapon CI Flake	15.0
Propylene Glycol		5.0
PEG 75 Lanolin	Solulan 75	0.5
Preservative		0.2
Fragrance		0.2
Triethanolamine		2.0

Procedure:

Disperse and dissolve the Carbomer 934 in the water. Add the Jordapon CI Flake and heat to 45C (110F) to dissolve. Premix the propylene glycol, PEG 75 lanolin, preservative, and fragrance; add this to the batch. Adjust pH to 7.0-7.5 with triethanolamine. Use this concentrate at 96% with Propellant A-46.

Formulation P-201

SOURCE: PPG Industries, Inc.: Suggested Formulations

# **Section XI**

## **Soaps and Hand Cleaners**

Clear Body Shampoo

<u>Ingredients:</u>	<u>% by Weight</u>
Bio-Terge 804	50.0
Fragrance, dye, preservative	Q.S.
Sodium chloride	Q.S.
D.I. water	Q.S. to 100

Mixing Procedure:

Add Bio-Terge 804 to D.I. water. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with sodium chloride.

Physical Attributes:

Clear, yellow liquid

Passed freeze thaw study

Stable for two weeks at 50C & one year at room temperature

Viscosity Profile:

as is: 1559 cps

0.5% sodium chloride: 2800 cps

1.0% sodium chloride: 4200 cps

2.0% sodium chloride: 5400 cps

Formulation No. 388

Pearlescent Body Soap

<u>Ingredients:</u>	<u>% by Weight</u>
Bio-Terge 804	50.0
Kessco Ethylene Glycol Monostearate	0.5
Sodium chloride	Q.S.
Fragrance, dye, preservative	Q.S.
D.I. water	Q.S. to 100

Mixing Procedure:

Add Bio-terge 804 and EGMS to water. Heat to 65C and blend until homogeneous. Cool to 40C while mixing. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with sodium chloride.

Physical Properties:

Yellow, pearly liquid

pH (as is): 6.0-7.0

Viscosity: 5,700 cps

Passed freeze thaw test

Stable for two weeks at 50C

Stable for one year at room temperature

Formulation No. 348

SOURCE: Stepan Co.; Suggested Formulations



Liquid Soap

<u>Ingredients:</u>	<u>% W/W</u>
1. Sodium C14-16 Olefin Sulfonate	23.00
2. Cocamidopropyl Betaine	5.00
3. Ritamid C	3.00
4. Glycol Stearate	1.50
5. Pationic ISL	1.00
6. Distilled Water	63.50
7. Propylene Glycol	2.00
8. Sodium Chloride (25% Solution)	+ -1.00
9. Patlac LA (44%)	QS
10. Color, Fragrance, Preservative	QS

Compounding Procedures:

Combine 1-5 and heat to 70C, mix until clear. Combine 6 and 7 and heat to 70C. Combine both phases, mix well, and cool to 40C. Add remaining ingredients. Adjust pH to 6.0 with Patlac LA. Adjust viscosity with Sodium Chloride solution.

Formulation 110-124

Liquid Hand Soap

This liquid hand soap owes its pleasant after-feel to Laneto 50.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Distilled Water	64.00
2. Alpha Olefin Sulfonate	19.00
3. Sodium Chloride (25% Solution)	1.00
4. Ritamid C	6.00
5. Ritaloe 1X	5.00
6. Coco Betaine	3.00
7. Laneto 50	2.00
Part B:	
8. Patlac LA	QS
Part C:	
9. Preservative	QS
10. Fragrance	QS

Compounding Procedures:

Blend Part A together at room temperature. Adjust pH to 6.0 with lactic acid. Add preservative and fragrance.

Formulation 110-126

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Clear Liquid Hand Soap

<u>Ingredients:</u>	<u>% by Weight</u>
Bio-Terge AS-40	15.4
Steol CS-460	9.0
Amphosol CA	4.0
Ninol 40-CO	1.0
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Sodium chloride	Q.S.
D.I. water	Q.S. to 100

Mixing Procedure:

Add the first four components to D.I. water and blend until clear. Adjust pH to 5.5-6.5 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with sodium chloride.

Physical Properties:

Light yellow liquid

pH (as is): 5.5-6.5

Viscosity Profile:

as is: 25 cps

0.5% sodium chloride: 50 cps

1.0% sodium chloride: 50 cps

2.0% sodium chloride: 50 cps

5.0% sodium chloride: 4750 cps

Passed freeze thaw and elevated temperature study

Formulation No. 389

Clear Liquid Hand Soap

<u>Ingredients:</u>	<u>% by Weight</u>
Bio-Terge AS-40	15.0
Steol CS-460	9.0
Amphosol CA	4.0
Ninol 96-SL	1.0
Citric acid	Q.S.
Dye, preservative	Q.S.
Sodium chloride	Q.S.
D.I. water	Q.S. to 100

Mixing Procedure:

Add the first four components to D.I. water. Heat to 40C and blend until clear. Adjust pH to 5.5-6.5 with citric acid. Add dye and preervative, if desired. Adjust to desired viscosity with sodium chloride.

Physical Properties:

Yellow liquid

Passed freeze thaw cycle

pH (as is): 5.5-6.5

Stable for two weeks at 50C

Formulation No. 390

SOURCE: Stepan Co.: Suggested Formulations

**Conditioning Hand Soap**

<b><u>Ingredients:</u></b>	<b><u>% by Weight</u></b>
Bio-Terge AS-40	23.30
Ammonyx MO	5.00
Ninol 96-SL	3.50
Amphosol CA	1.00
Polyquaternium-7	0.25
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Sodium chloride	Q.S.
D. I. water	Q.S. to 100

**Mixing Procedure:**

Add 1st five components to water, heat to 60C, blend until homogeneous. Adjust pH to 6.0-7.0 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with sodium chloride.

**Physical Properties:**

Clear yellow liquid

Freeze thaw and elevated heat stable

Viscosity Profile:

as is: 1000 cps

0.5% sodium chloride: 13,300 cps

1.0% sodium chloride: 25,300 cps

Formulation No. 371

**Emollient Liquid Hand Soap**

<b><u>Ingredients:</u></b>	<b><u>% by Weight</u></b>
Bio-terge AS-40	15.0
Steol CS-460	9.0
Amphosol CA	4.0
Polyquaternium-7	4.0
Ninol 96-SL	1.0
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Sodium chloride	Q.S.
D.I. water	Q.S. to 100

**Mixing Procedure:**

Disperse polyquaternium in water and heat to 50C. Add the first three components and Ninol 96-SL and mix well. Adjust pH to 5.5-6.5 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with sodium chloride.

**Physical Properties:**

Yellow clear liquid

pH (as is): 5.5-6.5

Viscosity Profile: as is: 10 cps

1.0% sodium chloride: 40 cps

2.0% sodium chloride: 260 cps

3.0% sodium chloride: 1670 cps

Freeze thaw and elevated heat stable

Formulation No. 373

SOURCE: Stepan Co.: Suggested Formulations

**Cold Process Waterless Hand Cleaner**

A creamy waterless hand cleaner that owes its smooth texture to Acritamer 934.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. White Mineral Oil	10.00
2. PEG 8 Oleate	3.00
Part B:	
3. Distilled Water	85.60
4. Triethanolamine (50%)	1.00
Part C:	
5. Acritamer 934	0.40

**Compounding Procedures:**

Mix Part A and Part B separately until clear. Add Part A to Part B slowly with agitation. Add Part C slowly while mixing and continue mixing for 30 minutes. Perfume as desired.

Formulation 110-107

**Non-Mineral Spirits Waterless Handcleaner**

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Finsolv TN	45.00
2. Laneto 50	4.00
3. Ritalan C	1.00
4. Ritachol 1000	12.00
5. Propylparaben	0.10
6. Grillocin HY-77	0.50
Part B:	
7. Distilled Water	37.30
8. Methylparaben	0.10

**Compounding Procedure:**

Heat Part A and Part B to 165F. Add Part A to Part B with mixing. Cool to 110F. Pour into jars.

Formulation 104-47

**SOURCE: R.I.T.A. Corp.: Suggested Formulations**

Handcleaner

A waterless handcleaner containing kerosene for hard to remove dirt and stains. Lanolin and Ritabate 80 leave the hands smooth, and help condition the skin.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Polysorbate 85	3.75
2. Ritabate 80	11.25
3. Anhydrous Lanolin USP	2.00
4. Kerosene	60.00
Part B:	
5. Distilled Water	23.00

Compounding Procedure:

Blend Part A ingredients together and heat to 45-50C. Heat Part B to a similar temperature and add to Part A slowly with mechanical stirring.

Formulation 110-108

Hand Cleanser

A viscous product which moisturizes and leaves a good after feel. Grilloten is used to prevent drying. Pationic ISL and Panthenol are used for moisturization and after feel.

<u>Ingredients:</u>	<u>% W/W</u>
1. Grilloten LSE 87K	3.00
2. Distilled Water	42.50
3. DL Panthenol	1.00
4. Sodium Laureth Sulfate	46.00
5. Pationic ISL	3.50
6. Euperlan PK 900	3.00
7. Sodium Chloride (25% Solution)	1.00
8. Preservative, Perfume	QS

Compounding Procedure:

Stir items 1 and 2 thoroughly. Add other ingredients through item 6, in given order, stirring after each addition. After addition of item 6, mix until uniform. Add perfume. Mix until uniform. Add Sodium Chloride solution to adjust viscosity.

Formulation 110-125

SOURCE: R.I.T.A. Corp.: Suggested Formulations

**Hand Cleaner**

This hand cleaner has a beautiful pearly opaqueness.

<u><b>Ingredients:</b></u>	<u><b>% W/W</b></u>
Part A:	
1. Bio Terge AS40	25.00
2. Distilled Water	66.62
3. Methylparaben	0.10
Part B:	
4. Ritasynt IP	4.00
5. Ritapeg 150 DS	2.00
Part C:	
6. Perfume	0.05
7. Kathon CG	0.05
Part D:	
8. Patlac LA (44%)	+ -0.18
Part E:	
9. Sodium Chloride (25% Solution)	2.00

**Compounding Procedures:**

Heat Part A and Part B to 185F. Add Part B to Part A with mixing. Avoid aeration. Mix 15 minutes, then cool. At 120, add perfume and Kathon. Adjust pH with Patlac LA. Adjust viscosity with Sodium Chloride solution.

Formulation 101-21

**Non-Drying Lotion Hand Cleaner**

A surfactant based hand cleaner with Pationic ISL to prevent drying and leave a luxurious after feel.

<u><b>Ingredients:</b></u>	<u><b>% W/W</b></u>
Part A:	
1. Distilled Water	64.80
2. Alpha Olefin Sulfonate	25.00
3. Methylparaben	0.10
Part B:	
4. Ritasynt IP	4.00
5. Pationic ISL	3.00
6. Ritapeg 150 DS	2.00
Part C:	
7. Sodium Chloride (25% Solution)	1.00
8. Kathon CG	0.05
9. Perfume	0.05
10. Patlac LA (44% Solution)	QS

**Compounding Procedure:**

Heat ingredients of Part A and Part B to 185F (85C). Add Part B to Part A with agitation and maintain heat until blended. Cool to 120F (50C), add Part C. Adjust pH to 6.0 with Patlac LA (44% solution). Fill.

Formulation 101-30

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Liquid Hand Soap

<u>Ingredients:</u>	<u>% by Weight</u>
Bio-Terge AS-40	10.00
Stepanol AM	8.74
Stepanol WAT	6.25
Ninol 40-CO	3.00
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Sodium chloride	Q.S.
D.I. water	Q.S. to 100

Mixing Procedure:

Add first four components to D.I. water and mix until homogeneous. Adjust pH to 5.5-6.5 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with sodium chloride.

Physical Properties:

Clear, yellow liquid  
 Passed three freeze/thaw cycles  
 Stable at 50C for two weeks  
 Viscosity Profile: as is: 10 cps  
                                   2.0% sodium chloride: 430 cps  
                                   3.0% sodium chloride: 2,300 cps

Formulation No. 149

Hand Soap

<u>Ingredients:</u>	<u>% by Wt.</u>
Bio-Terge 804	50.00
Kessco EGMS	1.50
Water, D.I.	34.75
d-Limonene	10.00
Sodium chloride	3.75

Mixing Procedure:

Mix first three ingredients and heat to 60C with slow agitation. EGMS must be thoroughly dispersed in solution. Start cooling while mixing slowly. Add d-Limonene when temperature is between 25C and 30C while mixing. Mix until homogeneous. Add salt and mix until homogeneous.

Properties:

Appearance: Pearled viscous liquid  
 pH, as is: 7.0  
 Viscosity @ 25C, cps: 5000  
 Odor: Citrus

Use Instructions:

Use as is from a dispensing bottle.  
 Formulation No. 197

SOURCE: Stepan Co.: Suggested Formulations

Liquid Hand Soap-Clear Type

	(w/w)
Deionized Water	56.70
Sodium C14-16 Olefin Sulfonate (40%)	30.00
Lexaine C (Cocamidopropyl Betaine)	12.00
Lexein X250 (Hydrolyzed Animal Protein)	1.00
Lexgard M (Methylparaben)	0.20
Lexgard P (Propylparaben)	0.10
Sodium Chloride	q.s.
Dye	q.s.
Fragrance	q.s.

**Procedure:**

Charge water into vessel and heat to 70C. Add Lexgard M and Lexgard P and mix until dissolved. Continue by adding C(14-16) olefin sulfonate, Lexaine C, and Lexein X250 with agitation. Mix until clear. Cool to 40C. Add sodium chloride to desired viscosity. Adjust pH. Cool batch to 30C with continued agitation. Fill.

**Observations:** Adjusted pH (direct): 7.0 with citric acid

Viscosity: 1,000 cps

Formulation SO-101

Liquid Hand Soap-Pearlescent Type

	%(w/w)
Sodium Lauryl Sulfate	30.00
Lexaine C (Cocamidopropyl Betaine)	15.00
Cocamide DEA	1.00
Lexein X250 (Hydrolyzed Animal Protein)	1.00
Lexemul EGDS (Glycol Distearate)	0.50
Lexgard M (Methylparaben)	0.20
Lexgard P (Propylparaben)	0.10
Deionized water	52.20
Dye	q.s.
Fragrance	q.s.

**Procedure:**

Charge water into vessel and heat to 75C. Add all ingredients except fragrance with agitation. Mix until clear. Adjust pH. Continue agitation and let cool to 55C. Add fragrance. Cool to 40C with continued agitation and fill.

Pearl will develop on standing.

**Observations:** Adjusted pH (direct): 7.0 with citric acid

Viscosity: 3,000 cps

Formulation SO-102

**SOURCE:** Inolex Chemical Co.: Suggested Formulations



Liquid Handwashing Cleanser

This preparation imparts a prolific, creamy textured foam with excellent cleansing characteristics. Bovinal 30 is utilized for its whole protein content imparting skin conditioning and protective qualities. Bovinal 30 is a whole natural ingredient and is not a hydrolysate consisting of a degraded perfume. Ritawax AEO also contributes emollience and lubricating properties to this product.

<u>Ingredients:</u>	<u>% W/W</u>
1. Sodium Laureth Sulfate	15.00
2. Cocamidopropyl Betaine	7.50
3. Ritamid C	3.00
4. Bovinal 30	2.00
5. Ritawax AEO	2.00
6. Lytron 614	0.75
7. Citric Acid	QS
8. Sodium Chloride (25% Solution)	1.00
9. Glydant	0.15
10. Distilled Water	67.85
11. Perfume	QS
12. Color	QS
13. Ritapeg 150 DS	0.75

Compounding Procedures:

Weigh and add the distilled water into a container and begin stirring and heating. Stir by means of a variable speed agitator equipped with a stirrer designed to minimize foaming and possible air entrapment. Begin weighing the other ingredients, with the exception of the perfume and Glydant. When all ingredients have been added, bring the temperature blend to 70-73C and stir until all ingredients have thoroughly dispersed. Begin cooling with continuous stirring to 40-43C and add the perfume and Glydant. Adjust the pH to 5.4 with Citric Acid. Cool to 25-30C and package

SOURCE: R.I.T.A. Corp.: Formulation 110-131

Hand Cleaner with Pumice

<u>Ingredients:</u>	<u>% by Weight</u>
D.I. Water	46.0
Pumice	42.2
Bio-Soft D-62	5.6
Ninol 40-CO	3.6
Potassium citrate	2.6
Sulfuric acid	Q.S.

Mixing Procedure:

Combine the pumice and water; mix until a soft paste. Add Ninol 40-CO and Bio-Soft D-62 and mix until homogeneous. Add potassium citrate and mix thoroughly, avoiding air entrapment in the product. Adjust pH to 7.0-8.0 with sulfuric acid.

Typical Properties:

pH (as is): 7.0-8.0

Grey viscous gel

Product must be shaken before use

SOURCE: Stepan Co.: Formulation No. 369

Liquid Soap

<u>Part:</u>	<u>Ingredient:</u>	<u>Wt. %</u>
A	Deionized Water	71.4
	Sodium Cocoyl Isethionate	Jordapon CI Dispersion 6.0
	Ammonium Lauryl Sulfate	Mazon AL-300 13.0
	Ethylene Glycol Distearate	Mapeg EGDS 0.5
	Na4EDTA	0.1
	Methyl Paraben	0.2
B	Cocamidopropyl Betaine	Mafo CAB 6.0
	Cocamide DEA	Mazamide JT-128 2.5
C	Fragrance	0.2
	Citric Acid	0.1

pH: 6.0-6.5

Viscosity: 2,500-3,500 cps (with 0.6-0.9% NaCl)

Appearance: Creamy, pearlescent liquid

**Procedure:**

Mix and heat Part A ingredients to 65C (150F). When uniform, add Mafo CAB and Mazamide JT-128. Cool batch to 40C (105F); add fragrance and adjust pH. Adjust viscosity with sodium chloride

**SOURCE:** PPG Chrmicals, Inc.: Formulation N-101Liquid Soap (Pearlized)

Sodium lauryl ether sulfate (35%)	30.0
Lexate BPQ [Lauramidopropyl Betaine (and) TEA-COCO-Hydrolyzed Animal Protein (and) Oleoamidopropyl Dihydroxypropyl Dimonium Chloride]	10.0
Glycerin	5.0
Lexgard M (Methylparaben)	0.2
Lexgard P (Propylparaben)	0.1
Deionized water	53.7
Lexemul EGMS (Glycol Stearate)	1.0
Lactic acid	to pH 7.0+-0.2

**Procedure:**

Combine ingredients with heat (70C) and mixing. Adjust pH. Pearl will develop on standing.

**SOURCE:** Inolex Chemical Co.: Suggested Formulation

Lotion Hand Cleaner

This hand cleaner has a beautiful pearly opaqueness.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Distilled Water	65.10
2. Alpha Olefin Sulfonate	25.00
3. Methylparaben	0.10
Part B:	
4. Ritasynt IP	4.00
5. Pationic ISL	3.00
6. Ritapeg 150 DS	2.00
Part C:	
7. Sodium Chloride (25% Solution)	+ -0.50
8. Preservative	0.05
9. Perfume	+ -0.05
10. Patlac LA (44%)	+ -0.20

Compounding Procedure:

Heat Part A and Part B to 185F (85C). Add Part B to Part A with agitation and maintain heat until blended. Cool to 120F (50C) and add C. Adjust pH to 6.0 with Patlac LA (44%). Cool to 95F (35C). Package.

Formulation 101-102

Lotion Hand Cleaner

This hand cleaner has a beautiful pearly opaqueness.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Distilled Water	65.00
2. Sodium C14-16 Olefin Sulfonate	25.00
3. Methylparaben	0.10
Part B:	
4. Ritasynt IP	4.00
5. Ritapeg 150 DS	2.00
Part C:	
6. Sodium Chloride (25% Solution)	+ -3.75
7. Kathon CG	0.05
8. Perfume	+ -0.05
9. Patlac LA (44%)	+ -0.05

Compounding Procedure:

Heat Part A and Part B to 185F (85C). Add Part B to Part A with agitation and maintain heat until blended. Cool to 120F (50C) and add part C. Adjust pH to 6.0 with Patlac LA. Cool to 95F (35C). Adjust viscosity with Sodium Chloride solution.

Formulation 103-25

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Mild Hand Soap

<u>Ingredients:</u>	<u>% by weight</u>
Steol CS-330	20.0
Amphosol CA	8.0
Ammonyx CDO	5.0
Glycerine	4.0
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Sodium chloride	Q.S.
D.I. water	Q.S. to 100

Mixing Procedure:

Add first four components to D.I. water and mix until clear. Adjust pH to 6.0-7.0 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with sodium chloride.

Physical Properties:

Clear, yellow liquid  
 pH (as is): 6.0-7.0  
 Passed three freeze thaw cycles  
 Stable for two weeks at 50C  
 Viscosity Profile: as is: 10 cps  
                           1.0% sodium chloride: 40 cps  
                           2.0% sodium chloride: 2,620 cps  
                           4.0% sodium chloride: 7,000 cps

Formulation No. 423

Pearlized Hand Soap

<u>Ingredients:</u>	<u>% by Weight</u>
Bio-Terge AS-40	20.0
Amphosol CA	3.8
Ninol 96-SL	2.0
Kessco Ethylene Glycol Monostearate Pure	2.0
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Sodium chloride	>2.0
D.I. water	Q.S. to 100

Mixing Procedure:

Combine first four ingredients with D.I. water. Heat to 65C with agitation and maintain until the solution is clear and homogeneous. Cool to 30C with mixing. Adjust pH to 7.0-8.0 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with at least 2.0% sodium chloride.

Physical Properties:

White pearly liquid  
 pH (as is): 7.0-8.0  
 Viscosity Profile:  
                           2.0% sodium chloride: 2390 cps  
                           3.0% sodium chloride: 16,300 cps

Passed freeze thaw and elevated temperature study

**Comment:** Requires at least 2.0% sodium chloride

Formulation No. 393

**SOURCE:** Stepan Co.; Suggested Formulations

Moisturizing Liquid Hand Soap

<u>Ingredients:</u>	<u>% w/w</u>
Sodium Lauryl Sulfate	10.00
Sodium Laureth Sulfate	20.00
PEG-7 Glyceryl Cocoate (Tegosoft GC)	3.50
Acrylates Stearate-50 Acrylates Copolymer (Antil 208)	0.75
Quaternium-80 (Abil Quat 3272)	0.20
Propylene Glycol	2.00
Dimethicone Copolyol (Abil B88183)	0.50
Water	55.05
Cocamidopropyl Betaine (Tego-Betaine L-7)	5.00
Cocamidopropyl Betaine (and) Glycol Distearate (and) Cocamide MEA (and) Cocamide DEA (Tego Pearl B-48)	3.00
Fragrance	Q.S.
Preservatives	Q.S.
Color	Q.S.

Procedure:

Mix the ingredients in order. Avoid air entrapment.

Germicidal Hand Cleanser

<u>Ingredients:</u>	<u>% w/w</u>
Propylene Glycol (and) PEG-55 Propylene Glycol Oleate (Antil 141 Liquid)	3.5
Cocamidopropyl Betaine (Tego-Betaine L-7)	20.0
Cocamidopropyl Betaine (Tego-Betaine S)	20.0
Dimethicone Copolyol (Abil B 88183)	0.3
Water	55.7
Chlorhexidine	0.5
Sodium Chloride	As Needed
Fragrance	Q.S.

Procedure:

1. Add the water and Tego-Betaine to a vessel-heat to 60C. Mix.
2. Add the Antil 141 Liquid. Mix until uniform.
3. Cool to 40C. Add the remaining ingredients. Adjust viscosity with Sodium Chloride.

**Note:** If a pearled or opaque product is desired, add 3-4% of Tego-Betaine B-48

**SOURCE:** Goldschmidt Chemical Corp.: Suggested Formulations

The following are examples of syndet bar formulations taken from the patent literature:

**Neutral pH Detergent Bar**

(US Patent #3,376,229, Lever Bros. April 2, 1968)

Jordapon CI Powder	59.0%
Sodium Alkylbenzene Sulfonate	2.0
Stearic Acid	22.7
Sodium Isethionate	1.4
Water	4.2
Soap Chip (80/20 Tallow/Coco)	10.0
Miscellaneous	0.7

**Neutral pH Detergent Bar**

(US Patent #3,248,333, Hewitt Soap Co. April 26, 1966)

Jordapon CI Powder	25.0%
Milled Bleached White Flour	54.0
Glycerine	3.0
Cornstarch	4.0
Lanolin	1.0
Isopropyl Myristate	2.0
Lactic Acid	2.0
Water	2.0

**Solid Iodophor Cleansing Bar**

(US Patent #3,687,855, Synergistics, August 29, 1972)

Jordapon CI Powder	20.0%
Polyvinylpyrrolidone Iodine	10.0
Cetyl Alcohol	2.0
PEG-4000	68.0

**Applications:**

The common bar of soap has provided personal cleanliness for centuries. But soap has several drawbacks which today's sophisticated consumer only grudgingly tolerates: irritancy, drying of the skin, and poor lathering/scum formation in hard water. Jordapon CI Powder's combination of mildness, soft after-feel, and excellent hard water performance offsets each of soap's negatives. Thus, syndet bars based on Sodium Cocoyl Isethionate have been well received by consumers. Jordapon CI Powder also offers advantages to the formulator and processor of syndet bars. The trace quantities of sodium chloride will eliminate salt-induced cracking of the bars. The low free fatty matter minimizes bar softness and tackiness. And the high active level means that Jordapon CI Powder imparts optimum foaming and cleansing performance.

SOURCE: PPG Chemicals, Inc.: Suggested Formulations

**Non-Drying Lotion Hand Cleaner**

A surfactant based hand cleaner with Pationic ISL to prevent drying and leave a luxurious after-feel.

<b><u>Ingredients:</u></b>	<b><u>% W/W</u></b>
Part A:	
1. Distilled Water	64.30
2. Alpha Olefin Sulfonate	25.00
3. Methylparaben	0.10
Part B:	
4. Ritasynt IP	4.00
5. Ritapeg 150 DS	2.00
Part C:	
6. Pationic ISL	3.00
7. Triclorcarban	0.50
Part D:	
8. Sodium Chloride (25% Solution)	1.00
9. Kathon CG	0.05
10. Perfume	0.05
11. Patlac LA (44%)	QS

**Compounding Procedures:**

Heat ingredients of Part A and Part B to 170F (77C). Premix Part C, then add to Part B. Add Part B to Part A with agitation and maintain heat until blended. Cool to 120F (50C), add Part D. Adjust pH to 6.0 with Patlac LA (44% solution). Fill.

Formulation 110-136

**Non-Drying Lotion Hand Cleaner**

A surfactant based hand cleaner with Pationic ISL to prevent drying and leave a luxurious after-feel.

<b><u>Ingredients:</u></b>	<b><u>% W/W</u></b>
Part A:	
1. Distilled Water	63.30
2. Alpha Olefin Sulfonate	25.00
3. Methylparaben	0.10
Part B:	
4. Ritasynt IP	4.00
5. Ritapeg 150 DS	2.00
Part C:	
6. Pationic ISL	3.00
7. Triclocarban	0.50
8. Propylene Glycol	1.00
Part D:	
9. Sodium Chloride (25% Solution)	1.00
10. Kathon CG	0.05
11. Perfume	0.05
12. Patlac LA (44%)	QS

**Compounding Procedure:**

Heat ingredients of Part A and Part B (separately) to 170F (77C). Premix Part C, then add to Part B, then add Part B and C blend to Part A with agitation and maintain heat until blended. Cool to 120F (50C), add Part D. Adjust pH to 6.0 with Patlac LA (44% solution). Fill.

Formulation 110-137

SOURCE: R.I.T.A. Corp.; Suggested Formulations

**Non-Drying Lotion Hand Cleaner**

A surfactant based hand cleaner with Pationic ISL to prevent drying and leave a luxurious after-feel.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Distilled Water	64.30
2. Alpha Olefin Sulfonate	25.00
3. Methylparaben	0.10
Part B:	
4. Ritasynt IP	4.00
5. Ritapeg 150 DS	2.00
Part C:	
6. Pationic ISL	3.00
7. Triclosan	0.50
Part D:	
8. Sodium Chloride (25% Solution)	1.00
9. Kathon CG	0.05
10. Perfume	0.05
11. Patlac LA (44% Solution)	QS

**Compounding Procedures:**

Heat ingredients of Part A and Part B to 170F (77C). Premix Part C, then add to Part B. Add Part B to Part A with agitation and maintain heat until blended. Cool to 120F (50C), add Part D. Adjust pH to 6.0 with Patlac LA (44% Solution). Fill.

Formulation 110-134

**Waterless Handcleaner**

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Distilled Water	58.25
2. Acritamer 934	0.50
3. Methylparaben	0.10
Part B:	
4. Laneto 50	3.00
5. Triethanolamine (50%)	1.00
Part C:	
6. Mineral Spirits, Deodorized	25.00
7. Ritachol 1000	10.00
8. Propylparaben	0.05
Part D:	
9. Ground Walnut Shells (AD 9 or AD 7 type)	2.00
Part E:	
10. Perfume	0.10
11. Preservative	QS

**Compounding Procedures:**

Dissolve Methylparaben in water. Then slowly, with mixing, add the Acritamer 934. Mix until thoroughly dispersed. Add Part B with mixing, then heat to 165F. Heat Part C to 165F. Add Part C to Parts A and B with mixing. Add Part D. Mix. Cool with mixing to 120F. Add Part E. Fill.

Formulation 110-135

SOURCE: R.I.T.A. Corp.: Suggested Formulations



Pearlized Liquid Soap

A pearlized liquid soap with excellent after feel.

<u>Ingredients:</u>	<u>%W/W</u>
Part A:	
1. Sodium C14-16 Olefin Sulfonate	20.00
2. Ritamid C	3.50
3. Pationic 138C	2.00
4. Pationic ISL	2.00
5. Rita EGDS	0.35
6. Ritapeg 150 DS	0.25
Part B:	
7. Laneto 50	2.00
8. Distilled Water	68.90
Part C:	
9. Sodium Chloride (25% Solution)	+ -1.00
10. Color, Fragrance and Preservative	QS
11. Patlac LA (44%)	QS

Compounding Procedures:

Combine ingredients in Part A and heat to 70C. Combine ingredients in Part B and heat to 70C. Add Part A to Part B with agitation. Cool to 40C. Add perfume, then cool to room temperature. Adjust pH to 7.0-7.5 with Patlac LA. Adjust viscosity with sodium chloride 25% solution.

Formulation 110-127

Pearlized Liquid Soap

A pearlized liquid soap which does not dry the skin and leaves a smooth feel.

<u>Ingredients:</u>	<u>% W/W</u>
1. Grilloten LSE 87K Soft	4.00
2. Distilled Water	21.00
3. Sodium Laureth Sulfate - 40 Mole	40.00
4. Ritasynt IP	3.00
5. Cocamidopropyl Betaine	8.00
6. Distilled Water	23.00
7. Sodium Chloride (25% Solution)	+ -1.00
8. Preservative, Perfume	QS

Compounding Procedures:

Combine ingredients 1, and 2 and mix. Heat to 175F. Add ingredient 4 to this premix. Maintain at 175F. Combine ingredients 3, 5 and 6 in main mixer and heat to 175F. Add ingredients 1, 2 and 4 premix to ingredients 3, 5 and 6 while mixing. Mix until uniform. Begin cooling at 120F. At 120F, add perfume and preservative. Cool to 95F with mixing. Adjust viscosity with Sodium Chloride solution.

Formulation 110-129

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Sanitizing Hand Soap

<u>Ingredients:</u>	<u>% by Wt.</u>
Water	83.9
Natrosol 250 HHR	0.5
BTC 2125M (50% active)	5.0
Amphosol CG	5.5
Ammonyx CDO	3.5
Amidox C-5	1.6

**Mixing Procedures:**

Charge vessel with water and heat to 140F with high speed mixing. Slowly sprinkle in Natrosol 250HHR. Continue to mix until the Natrosol is hydrated and a clear homogeneous solution is obtained. Discontinue heating and add remaining ingredients in order shown. Mix until a clear homogeneous solution is obtained. Finally, adjust pH to 6.7 with 10% citric acid.

**Properties:**

Appearance: Clear, light yellow liquid  
 pH, as is: 6.7  
 Density, lbs/gal: 8.35  
 Viscosity @ 25C, cps: 100-300

**Use Instructions:**

This formulation effectively reduces bacterial flora of the skin. For one-step hand washing and sanitizing place approximately 5 cc (ml) in palm of hand, add approx. 15 cc (ml) of water, lather and wash normally. After use, hands must be thoroughly rinsed with potable water. Repeat whenever re-entering production area.

This formulation must be dispensed from an adequate dispenser located a sufficient distance from the processing line to prevent accidental production contamination.

This formulation is authorized for use by USDA in federally inspected meat and poultry processing plants under Category E2: Hand Washing and Sanitizing Compounds.

Efficacy tests have demonstrated that this formulation is effective in water up to 400 ppm hardness as CaCO<sub>3</sub>.

**Comments:**

To market a product based on this formulation, a completed "Application for Authorization of Distributor Product" must be submitted to USDA. Contact Stepan's Regulatory Dept. for assistance.

**Storage Stability:**

This formulation is freeze/thaw stable. Upon thawing it will return to its original state.

Store in a cool dry place.

SOURCE: Stepan Co.; Formulation No. 74

Skin Conditioning Liquid Soap

	<u>%(w/w)</u>
Deionized Water	52.70
TEA Lauryl Sulfate	35.00
Lexaine O (Oleamidopropyl Betaine)	10.00
Lexein X250 (Hydrolyzed Animal Protein)	2.00
Lexgard M (Methylparaben)	0.20
Lexgard P (Propylparaben)	0.10
Sodium Chloride	q.s.
Dye	q.s.
Fragrance	q.s.

**Procedure:**

Charge water into vessel and heat to 70C. Add Lexgard M, Lexgard P, TEA lauryl sulfate, Lexaine O, and Lexein X250 with agitation. Mix until clear. Cool to 40C. Add sodium chloride to desired viscosity. Adjust pH. Cool and package.

**Observations:**

Adjusted pH (direct): 7.0 with citric acid  
Viscosity: 200 cps

Formulation SO-103

Clear Gel Hand Soap

	<u>%(w/w)</u>
Ammonium Lauryl Sulfate	49.70
Deionized Water	40.00
Lexaine IS (Isostearamidopropyl Betaine)	10.00
Lexgard M (Methylparaben)	0.20
Lexgard P (Propylparaben)	0.10
Sodium Chloride	q.s.
Dye	q.s.
Fragrance	q.s.

**Procedure:**

Charge water into vessel and heat to 70C. Add ammonium lauryl sulfate, Lexaine IS, Lexgard M, and Lexgard P with agitation. Mix until clear. Add sodium chloride to desired viscosity. Adjust pH. Cool and package.

**Observations:**

Appearance: Clear light yellow gel  
Adjusted pH (direct): 5.1 with citric acid  
Viscosity: 11,000 cps

Formulation SO-104

SOURCE: Inolex Chemical Co.: Suggested Formulations

The following formulations produce both gel and lotion type waterless hand cleaners offering:

Excellent heavy soil detergency	Excellent water rinsability
Quick "break" on application	Ease of manufacture
Excellent shelf stability	

#### Gel Waterless Hand Cleaner

Water	58.0%
Monamine 853	11.0%
Deodorized Kerosene	27.0%
Oleic Acid	4.0%

#### Mixing Procedure:

Add ingredients in the order listed with good agitation.

#### Slow Setting Gel Waterless Hand Cleaner

The addition of Gafac RM-510 to the basic formulation delays the set-time sufficiently to permit liquid filling of containers, and eliminates the need for heavy mixing and piston filling equipment. This system remains flowable for approximately one hour after filling, and on standing overnight develops the desired "pinging" gel structure.

Water	58.0%
Monamine 853	11.0%
Gafac RM-510	2.0%
Deodorized Kerosene	27.0%
Oleic Acid	2.0%

#### Mixing Procedure:

Add ingredients in the order listed with good agitation.

**SOURCE: Mona Industries, Inc.: Suggested Formulations**

#### Waterless Hand Cleaner

<u>Ingredient:</u>	<u>As Supplied, %</u>
Water	47.13
Aculyn 22	1.67
Triton N-101	3
Deodorized Kerosene	38
Mineral Oil	10
NaOH (50%)	0.2

#### Mixing Procedure:

Add the ingredients in the listed order. High shear mixing is necessary to disperse the solvents (kerosene, oil).

**SOURCE: Rohm and Haas Co.: Suggested Formulations**

**Slow Set Waterless Hand Cleaner**

	<u>% by Weight</u>
Water	47.90
Nonyl Nonoxynol - 10 Phosphate	2.40
Nonyl Phenol 9.5 moles E.O.	1.20
Dimethicone Copolyol	0.40
Oleic Acid	1.80
Polysorbate 80 & Acetylated Lanolin Alcohol & Cetyl Alcohol	0.40
Monamine 1255	5.90
Mineral Spirits	40.00

**Procedure:**

Add in order listed. Slowly add mineral spirits with agitation. Add fragrance, coloring and preservatives as required. Mix until uniform and package.

**Appearance:**

White pourable lotion which sets in 3-4 hours and becomes a ringing gel after 12 hours.

**Fast Set Waterless Hand Cleaner**

	<u>% by Weight</u>
Odorless Mineral Spirits	40.0
Monamine 1255	12.0
Monafax 785	0.5
Glycerine (99%)	1.0
Light Mineral Oil	2.0
Water	44.5

**Procedure:**

Add ingredients as listed except water. Mix well, stop agitation and add water, turn agitation on and mix.

**Appearance:** White ringing gel

**Note:**

Product sets immediately upon thorough agitation and requires A piston type filler.

**SOURCE:** Mona Industries, Inc.: Suggested Formulations

Soft Skin Liquid Soap

<u>Ingredients:</u>	<u>% w/w</u>
Water	54.20
Tetrasodium EDTA	0.10
Sodium Lauryl Sulfate	15.00
Sodium Laureth Sulfate	20.00
Cocamidopropyl Betaine (Tego Betaine L-7)	6.00
Dimethicone Copolyol (Tego B 88183)	0.50
PEG-7 Glyceryl Cocoate (Tegosoft GC)	3.00
Fragrance	Q.S.
Preservative	Q.S.
Color	Q.S.
PEG-18 Glyceryl Oleate/Cocoate (Antil 171)	1.20
Sodium Chloride (25% Solution)	Q.S.

Procedure:

1. Dissolve the Tetrasodium EDTA in the water.
  2. Add ingredients in order, mixing between additions. Avoid air entrapment.
  3. Slowly mix in the PEG-18 Glyceryl Oleate/Cocoate.
  4. Adjust viscosity with the 25% solution of Sodium Chloride
- Note:** For a pearlized formula substitute the following for part of the water:

Cocamidopropyl Betaine (and) Glycol Distearate (and) Cocamide MEA (and) Cocamide DEA (Tego Pearl B-48) 3.00%

Conditioning Liquid Soap

<u>Ingredients:</u>	<u>% W/W</u>
Water	57.80
Tetrasodium EDTA	0.10
Sodium Laureth Sulfate	30.00
Cocamidopropyl Betaine (Tego Betaine L-7)	8.00
PEG-7 Glyceryl Cocoate (Tegosoft GC)	2.50
Quaternium-80 (Abil Wax 3272)	0.25
Dimethicone Copolyol (Abil B 88183)	0.35
Fragrance	Q.S.
Preservative	Q.S.
Color	Q.S.
PEG-18 Glyceryl Oleate/Cocoate (Antil 171)	1.00
Sodium Chloride (25% Solution)	Q.S.

Procedure:

1. Dissolve the Tetrasodium EDTA in the water.
  2. Add ingredients in order, mixing between additions. Avoid air entrapment.
  3. Slowly mix in the PEG-18 Glyceryl Oleate/Cocoate.
  4. Adjust viscosity with the 25% solution of Sodium Chloride.
- Note:** For a pearlized formula substitute the following for part of the water:

Cocamidopropyl Betaine (and) Glycol Distearate (and) Cocamide MEA (and) Cocamide DEA (Tego Pearl B-48) 3.00%

SOURCE: Goldschmidt Chemical Corp.: Suggested Formulations

Soap Base Beauty Bar

A high foaming beauty bar which combats dryness and leaves a luxurious after-feel.

Ingredients:

	%W/W
1. Soap Base 80/20 Tallow/Coco	+94.00
2. Pentasodium Pentetate	QS
3. Tetrasodium Etidronate	QS
4. Perfume Oil K-79-531	1.00
5. Pationic ISL	3.00
6. Polyox WSR N-80	1.50
7. Titanium Dioxide	0.50

Compounding Procedure:

Pre-mix the Pationic ISL and perfume oil to reduce the viscosity of the Pationic ISL and facilitate subsequent incorporation. Combine the other materials to some degree of uniformity using suitable equipment. Add the Pationic-perfume mixture and continue blending until uniform.

pH: 10.1-10.5

Formulation H-89-P-10

Liquid Soap

A high quality liquid soap especially suited to multiple daily use. The Grilloten has been shown to reduce irritation. The Panthenol also helps minimize irritation, plus moisturizes. The Betaine and Euperlan prevent stripping and leave a good after feel.

Ingredients:

	% W/W
1. Grilloten LSE 87K Soft	4.00
2. Distilled Water	43.00
3. DL Panthenol	1.00
4. Sodium Laureth Sulfate	40.00
5. Euperlan PK 810	3.00
6. Cocamidopropyl Betaine	8.00
7. Sodium Chloride (25% Solution)	1.00
8. Preservative, Perfume	QS

Compounding Procedures:

Stir ingredients 1 and 2 thoroughly. Add other ingredients in given order, stirring after each addition. Add Sodium Chloride solution in small amounts to increase viscosity.

Formulation 110-128

SOURCE: R.I.T.A. Corp.; Suggested Formulations

Transparent Liquid Soap

This clear, rich-lathering system has the mildness and soft skin feel of Jordapon ACI-30 surfactant. And it is economical to make, due to the low level of actives and efficient room-temperatures processing.

<u>Part:</u>	<u>Ingredient:</u>	<u>Wt. %</u>
A	Demineralized Water	58.80
	Ammonium Lauryl Sulfate	Sipon L-22 18.50
	Ammonium Cocoyl Isethionate	Jordapon ACI-30 9.20
	Na4EDTA	0.20
	Imidazolidinyl Urea	Germall 115 0.20
B	Methyl Paraben	0.20
	Cocamidopropyl Betaine	Mafo CAB 3.40
	Cocamide DEA	Mazamide JT-128 0.90
	Fragrance	0.05
C	Citric Acid, 50%	0.10
D	Deionized Water	6.75
	Ammonium Chloride	1.70

pH: 6.0-6.5

Viscosity: 2500-3500 cps

Appearance: Clear, nearly water-white liquid

Procedure:

Mix part A ingredients until clear and uniform. In a side vessel, blend part B together. This premix will not be clear, but it will speed up the dissolution of the fragrance. Add B to A, mixing until clear and uniform. Adjust the pH with citric acid. In the side vessel, dissolve the NH4Cl in the part D water, and add to the batch. Viscosity is responsive to NH4Cl level, from under 1000 cps at 1% salt to 4000 cps at 2% salt.

Formulation N-104

Applications: Bars

Jordapon CI Flake offers the bar producer a convenient, preformulated chip. It can be amalgamated, plodded, and stamped much the same as regular soap.

Syndet Bar

Jordapon CI Flake	83.5%
Soap Chips (80/20 Tallow/Coco)	10.0
Water	5.0
Fragrance, Pigments, etc.	1.5
Formulation 7003-49	

SOURCE: PPG Chemicals, Inc.: Suggested Formulations



**Waterless Handcleaner**

This waterless handcleaner contains Grillocin HY-77 to absorb and neutralize odors. It leaves the hands soft and smooth.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Mineral Spirits, Deodorized	45.00
2. Laneto 50	4.00
3. Ritalan C	1.00
4. Ritachol 1000	12.00
5. Grillocin HY-77	0.50
6. Propylparaben	0.10
Part B:	
7. Distilled Water	37.10
8. Methylparaben	0.10
Part C:	
9. Perfume	0.20

**Compounding Procedure:**

Heat Parts A and B to 165F. Add Part A to Part B with mixing. Cool to 120F. Add Part C. Fill into jars while warm.

Formulation 104-18

**Waterless Handcleaner**

This creamy waterless handcleaner owes its smooth texture to Acritamer 934 and Ritachol, and pleasant after feel to Laneto 50.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Distilled Water	60.25
2. Acritamer 934	0.50
3. Methylparaben	0.10
Part B:	
4. Laneto 50	3.00
5. Triethanolamine (50%)	1.00
Part C:	
6. Mineral Spirits, Deodorized	25.00
7. Ritachol 1000	10.00
8. Propylparaben	0.05
Part D:	
9. Perfume	0.10

**Compounding Procedure:**

Dissolve Methylparaben in water. Then slowly, with mixing, add the Acritamer 934. Mix until thoroughly dispersed. Add Part B with mixing, then heat to 165F. Heat Part C to 165F. Add Part D. Mix. Cool with mixing to 120F. Add Part D. Fill.

Formulation 104-19

SOURCE: R.I.T.A. Corp.: Suggested Formulations

**Waterless Handcleaner****Ingredients:**

	<b><u>% W/W</u></b>
Part A:	
1. D-Limonene	5.00
2. Mineral Spirits, Deodorized	40.00
3. Laneto 50	4.00
4. Ritalan C	1.00
5. Ritachol 1000	12.00
6. Grillocin HY-77	0.50
7. Propylparaben	0.10
Part B:	
8. Distilled Water	37.10
9. Methylparaben	0.10
Part C:	
10. Perfume (optional)	0.20

**Compounding Procedure:**

Heat Parts A and B to 165F. Add Part A to Part B with mixing.  
Cool to 120F. Add Part C. Fill into jars while warm.  
Formulation 110-132

**Waterless Handcleaner****Ingredients:**

	<b><u>% W/W</u></b>
Part A:	
1. D-Limonene	45.00
2. Laneto 50	4.00
3. Ritalan C	1.00
4. Ritachol 1000	12.00
5. Grillocin HY-77	0.50
6. Propylparaben	0.10
Part B:	
7. Distilled Water	37.10
8. Methylparaben	0.10
Part C:	
9. Perfume (Optional)	0.20

**Compounding Procedure:**

Heat Parts A and B to 165F. Add Part A to Part B with mixing.  
Cool to 120F. Add Part C. Fill into jars while warm.  
Formulation 110-133

**SOURCE: R.I.T.A. Corp.: Suggested Formulations**

**Waterless Hand Cleanser with Antimicrobial Properties**

This waterless hand cleaner is virtually without odor. It has excellent cleansing characteristics and "breaks" rapidly upon application. Forlan L contributes emulsion stability and lanolin-related moisturizing and emollient qualities. Ritachol helps prevent defatting of the skin due to the cleansing related solvent. Antimicrobial properties are imparted by the use of Triclosan.

<u>Ingredients:</u>	<u>% W/W</u>
1. Ritachol	3.00
2. C13-14 Isoparaffin	40.00
3. Emulsifier WHC	14.00
4. Forlan L	2.00
5. Propylparaben	0.10
6. BHA	0.10
7. Triclosan	0.10
8. Distilled Water	40.60
9. Methylparaben	0.10
10. Perfume	QS

**Compounding Procedures:**

Weigh and add 1-7 ("oil blend") into a container and begin heating and stirring. Heat the "oil" phase to 70-73C. Weigh and add 8 and 9 into another container and begin heating and stirring. When both blends are at 70-73C, add the water/paraben blend to the "oil" phase blend. Begin cooling, after adding all the water containing blend, while stirring continuously. Add 10 at 45-48C. Package fill into suitable containers at 35-40C.

Formulation 110-138

**Waterless Hand Cleaner**

A waterless hand cleaner with Laneto 50 to prevent drying and Grillocin HY-77 to remove objectionable household or industrial odors that have been retained on the hands.

<u>Ingredients:</u>	<u>% W/W</u>
<b>Part A:</b>	
1. Magnesium Aluminum Silicate	2.00
2. Distilled Water	69.30
<b>Part B:</b>	
3. Propylene Glycol	5.00
4. Cocamidopropyl Betaine	3.00
5. Laneto 50	3.00
6. Sodium Lauryl Sulfate	0.50
<b>Part C:</b>	
7. Glyceryl Oleate	5.00
8. Ritapro 300	1.50
9. Mineral Spirits	10.00
10. Methylparaben	0.10
11. Propylparaben	0.10
12. Grillocin HY-77	0.50

**Compounding Procedures:**

Add ingredient 1 into 2 and heat with stirring to 50C. Mix B into A, keeping the mixture at 50C. Then mix C into the A and B mixture. Stir until smooth while cooling.

Formulation 110-144

SOURCE: R.I.T.A. Corp.: Suggested Formulations

# **Section XII**

## **Sun Care Products**

**All Natural Tan Glow Intensifying Gel**

A tanning enhancer gel with tyrosine to hasten tanning with aloe, glycerin and propylene glycol for humectancy and with Panthenol as an anti-inflammatory agent.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	37.00
2. Ritaloe 1X	45.00
3. Acritamer 940	2.00
4. Glycerin	3.50
5. Propylene Glycol	3.50
6. Germaben II	1.00
7. dl-Panthenol	1.00
8. Supersat AWS 4	1.00
9. Tyrosine	2.00
10. Triethanolamine (50%)	4.00
11. Fragrance	QS

**Compounding Procedure:**

Weigh ingredients 1 and 2 into mixing container. Slowly add ingredient 3 into stirred mixture, stir until completely dispersed. Add ingredients 4-9 into this mixture and stir until completely dispersed. Add ingredient 11. Slowly add ingredient 10 to stirred mixture, stir until the batch is uniform. Pour into suitable containers.

SOURCE: R.I.T.A. Corp.: Formulation HB-89-PA-4

**Sun Stick**

This product in stick form will serve as a moisturizer for the skin and will give an oil-free smooth coverage of sunscreen which stays effective for a time span.

	<u>% (w/w)</u>
Sodium Stearate C-1	10.00
Glycerine	69.00
Lexquat AMG-0 (Oleamidopropyl Dihydroxypropyl Dimonium Chloride)	10.00
Amerscreen P (Ethyl Dihydroxypropyl PABA)	6.00
SDA-40 (200 P)	5.00

**Procedure:**

Charge batch vessel with glycerine. Begin mixing and heating to 78C±2C. Add the sodium stearate C-1 and let it mix. Add the Amerscreen P with mixing. Add the Lexquat AMG-0 and continue mixing. Begin to cool. At 45C, add the alcohol. Continue mixing at this temperature for 10 minutes then pour into the mold.

SOURCE: Inolex Chemical Co.: Formulation SN-100

**Improved Wear Sunscreen**

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Cetyl Dimethicone Copolyol (Abil EM-90)	2.0
Caprylic/Capric Triglyceride (Tegosoft CT)	3.0
Mineral Oil	3.0
Octyl Palmitate (Tegosoft OP)	1.0
Octyl Stearate (Tegosoft OS)	1.0
Hydrogenated Castor Oil	0.5
Synthetic Wax or Beeswax	0.5
Cyclomethicone (and) Dimethiconol (and) Dimethicone (Abil OSW-13)	10.0
Octyl Methoxycinnamate	4.5
Phase B:	
Water	73.9
Sodium Chloride	0.6
Preservatives	Q.S.
Fragrance	Q.S.

**Procedure:**

1. Add the components of Phase A. Heat while mixing to 80C to incorporate the waxes. Cool to 50C.
2. Heat Phase B to 50C. Add B to A slowly with a low energy mixer. Maintain a smooth milky appearance at all times.
3. Cool to 35C with sweep mixer. Add fragrance.
4. Homogenize.

**Clear Anhydrous Sunscreen**

<u>Ingredients:</u>	<u>% w/w</u>
Cyclomethicone (Abil B 8839)	56.0
Cyclomethicone (and) Dimethiconol (and) Dimethicone (Abil OSW-12)	20.0
Diisopropyl Adipate	10.0
C12-15 Alcohols Benzoate	10.0
Octyl Dimethyl PABA	4.0

**Procedure:**

Mix ingredients in order.

This formula is anhydrous, oil-free and clear. It is quick spreading and hydrophobic on the skin.

**SOURCE:** Goldschmidt Chemical Corp.: Suggested Formulations

Lip Balm with Sunscreen-A

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Petrolatum	40.7
Cetyl Alcohol	4.0
Beeswax	6.0
Carnauba Wax	6.4
Paraffin	16.4
Ozokerite	6.0
Cetyl Dimethicone (Abil Wax 9801)	1.0
Stearyl Dimethicone (Abil Wax 9800)	1.0
Caprylic/Capric Triglycerides (Tegosoft CT)	5.0
Cetearyl Octanoate (Tegosoft Liquid)	3.0
Mineral Oil	5.0
Phase B:	
Octyl Methoxycinnamate	4.0
Benzophenone-3	1.5
Phase C:	
Color	Q.S.
Fragrance	Q.S.

Lip Balm with Sunscreen-B

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Petrolatum	44.5
Cetyl Alcohol	6.0
Beeswax	14.0
Carnauba Wax	2.0
Paraffin	8.0
Ozokerite	3.0
Cetyl Dimethicone (Abil Wax 9801)	0.5
Stearyl Dimethicone (Abil Wax 9800)	0.5
Caprylic/Capric Triglycerides (Tegosoft CT)	8.0
Cetearyl Octanoate (Tegosoft Liquid)	3.0
Mineral Oil	5.0
Phase B:	
Octyl Methoxycinnamate	4.0
Benzophenone-3	1.5
Phase C:	
Color	Q.S.
Fragrance	Q.S.

Procedure:

1. Heat phase A ingredients together until melted. Begin cooling.
2. Add Phase B, mix until uniform.
3. Add color and fragrance when batch is cooled to a creamy consistency.
4. Mold.

SOURCE: Goldschmidt Chemical Corp.: Suggested Formulation

**"PABA Free" Waterproof Sunscreen (Approx. SPF 6)**

Phase A:	% Weight
Octyl Methoxycinnamate (Escalol 557)	7.50
Octyl Palmitate (Estol EHP 1543)	5.00
Cetyl Alcohol	1.00
Stearic Acid (Emersol 132)	2.00
PEG-40 Stearate (Myrj 52S)	1.50
Dimethicone Copolyol (Abil B8852)	1.00
Dimethyl Stearamine (Armeen DM 180)	2.00
Phase B:	
Water	66.70
Triethanolamine, 99%	0.70
Acrylates/Octylpropenamide Copolymer (Dermacryl-79)	2.00
Carbomer-941, 2% Solution (Carbopol 941)	10.00
Methylparaben	0.15
Propylparaben	0.10
Phase C: Germall II	0.15
Phase D: Fragrance	0.20

**Procedure:**

Add triethanolamine to water and heat to 80C, add Dermacryl-79 slowly and disperse it thoroughly. Add Carbopol solution to it and rest of ingredients of Phase B. Mix thoroughly. Combine Phase A ingredients and heat to 80C. Add Phase A to Phase B at 80C. Mix for 15 minutes. Cool to 40C and add Phase C and Phase D to it. Cool to room temperature and package.

**Waterproof Sunscreen SPF 22**

Phase A:	% Weight
Octyl Dimethyl PABA	8.00
Octyl Salicylate	5.00
Octyl Methoxycinnamate (Escalol 557)	7.50
Benzophenone-3 (Escalol 567)	4.00
Octyl Palmitate (Estol EHP 1543)	3.00
Cetyl Alcohol	2.00
PEG-40 Stearate (Myrj 52S)	1.00
Glyceryl Stearate (Estol 1473)	2.00
Dimethicone Copolyol (Abil B8852)	1.00
Stearic Acid (Emersol 132)	6.00
Lauramidopropyl Dimethylamine (Lexamine L-13)	2.00
Acrylates/Octylpropenamide Copolymer (Dermacryl-79)	2.00
Phase B:	
Water	53.60
Carbomer-941 (Carbopol 941)	0.20
Triethanolamine, 99%	1.50
Phase C: Germaben II-E	1.00
Phase D: Fragrance	0.20

**Procedure:**

Disperse Carbopol 941 in water and heat to 80C; add triethanolamine slowly to prepare Phase B. Combine Phase A ingredients except Dermacryl-79 and heat to 80C. Sift Dermacryl-79 into the oil phase with constant stirring until dissolved. Add Phase A to Phase B at 80C and mix for 15 minutes. Cool to 45C, add Phase C and Phase D. Continue cooling to room temperature and package.

**SOURCE:** Sutton Laboratories; Suggested Formulations



Pearlescent Waterproof Sun Creme

This formula is a light textured oil in water emulsion which contains a high percentage of Flamenco Ultra Silk pearl pigment. An attractive pearlescent cream, this product also functions as an effective waterproof sunscreen.

<u>Phase:</u>	<u>Ingredients:</u>	<u>% wt.</u>
A.	PVP/Eicosene Copolymer (Ganex V220)	4.10
	Stearic Acid	3.30
	Triisostearyl Trilinoleate (Schercemol TIST)	3.30
	Isononyl Isononanoate (Wickenol 151)	3.30
	Octyl Methoxycinnamate (Parso1 MCX)	2.60
	Cetyl Alcohol (Adol 52)	0.80
	Benzophenone-3 (Uvinul M-40)	0.80
	Dimethicone (Dow Corning 200 Fluid)	0.20
	Antimicrobials (oil soluble)	q.s.
B.	DEA Cetyl Phosphate (Amphisol)	2.00
C.	Water (q.s. to 100%)	46.60
	Glycerin	4.10
	Antimicrobials (water soluble)	q.s.
	Carbomer 940-2% aqueous solution (Carbopol 940)	3.80
D.	Triethanolamine	0.10
E.	Flamenco Ultra Silk	25.00

Procedure:

- I. Separately heat Phase A and Phase C to 80+-3C while mixing until completely uniform.
- II. Stir Phase B into Phase A until homogeneous.
- III. Add pre-mixed Phase A & Phase B to Phase C while mixing until completely uniform. Then cool to 40C with slow stirring.
- IV. Add Phase D with stirring.
- IV. Disperse pigment (Phase E) into warm base.
- V. Cool to 30C and fill.

SOURCE: The Mearl Corp.; Formulation CLS-921967

Moisturizing Water Resistant Sunscreen Gel

<u>Ingredients:</u>	<u>% W/W</u>
Phase A:	
Water, Deionized	q.s.
PVM/MA Decadiene Crosspolymer (Stabileze 06)	0.40
Phase B:	
Sodium Hydroxymethylglycinate (Suttocide A)	0.40
Phase C:	
Phenoxyethanol	0.60
Phase D:	
Maleated Soybean Oil (Ceraphyl GA-D)	2.00
Aloe Vera Gel (10X Concentrate)	0.20
Tocopheryl Acetate	0.05
Soluble Collagen	0.05
Octyl Methoxycinnamate (Escalol 557)	
or Octyl Dimethyl PABA (Escalol 507)	5.00
Fragrance	0.10

SOURCE: ISP Van Dyk, Inc.; Formulation #K142-52-1

**Pearly Bronze/Copper Suntan Cream**

A suntan cream containing a high percentage of a copper or bronze pearl pigment not only has the advantage of color/function association, but can create an attractive "instant tan". A wide range of shades can be produced to satisfy different opinions on how a tan should look.

<u>Phase:</u>	<u>Ingredients:</u>	<u>% wt.</u>
A.	Octyl Methoxycinnamate (Parsol MCX)	3.00
	Lanolin Acid (Amerlate LFA)	3.00
	Isopropyl Lanolate (Amerlate P)	1.50
	Petrolatum (and) Lanolin (and) Lanolin Alcohol (Amerchol C)	4.00
	Mineral Oil, 70 visc. (Carnation White Mineral Oil)	3.50
	Glyceryl Stearate SE (Tegin)	6.00
	Stearyl Alcohol	3.00
	Ozokerite (170D)	5.00
	Antimicrobials (oil soluble)	q.s.
	Antioxidants	q.s.
	Triethanolamine	1.00
	Methyl Gluceth-10 (Glucam E-10)	2.50
	Water (q.s. to 100%)	62.50
B.	Antimicrobials (water soluble)	q.s.
	Fragrance	q.s.
C.	Cloisone' Super Copper 350Z	5.00

**Procedure:**

- I. Separately heat Phase A and B to 80+-3C.
- II. Stir Phase B into Phase A until homogeneous. Then cool to 40C with slow stirring.
- III. Disperse pigment (Phase C) into Phase A-B.
- IV. Cool to 30C and fill.

SOURCE: The Mearl Corp.: Formulation CLS-921965

**Sunscreen Cream(SPF 15)**

<u>Ingredients:</u>	<u>%W/W</u>
Phase A:	
PVM/MA Decadiene Crosspolymer (Stabileze 06)	0.4
Water, Deionized	q.s.
Phase B:	
Sodium Hydroxymethylglycinate (Suttocide A)	0.5
Phase C:	
Octyl Methoxycinnamate (Escalol 557)	7.5
Benzophenone-3 (Escalol 567)	3.0
Octyl Salicylate (Escalol 587)	3.0
Hydrogenated Polyisobutenes (Panalane L-14E)	5.0
Isocetyl Stearoyl Stearate (Ceraphyl 791)	7.0
Glycol Stearate SE (Cerasynt MN)	7.0
PEG-20 Stearate (Cerasynt 840)	3.0
Phase D:	
Fragrance	0.1
Water, Deionized	4.0
Allantoin	1.0

SOURCE: ISP Van Dyk, Inc.: Formulation #G139-28-3

Presun Moisture Accelerator

	<u>% Weight</u>
Phase A:	
Polysorbate 80	3.00
Octyl Palmitate	2.50
Glyceryl Stearate	2.50
Stearyl Alcohol (Crodacol S-95)	2.00
Tocopheryl Linoleate (Vitamin E Linoleate)	1.50
Sorbitan Stearate	1.50
Cetyl Esters	1.50
Tocopheryl Acetate (Vitamin E Acetate)	1.00
Phase B: Water	80.35
Panthenol (Dexpanthenol)	1.00
Carbomer-934 (Carbopol 934)	0.30
Phase C: Triethanolamine, 50% Solution	0.60
Phase D:	
Corn Oil (and) Retinyl Palmitate (Vitamin A Palmitate P1MO/BH)	1.20
Germaben II-E	0.75
Fragrance	0.20
Tocopherol (Vitamin E Alcohol)	0.10

Dissolve panthenol in water, sprinkle in Carbopol 934, mix until properly dispersed. Separately heat Phase A and Phase B to 75C; add Phase A to Phase B with agitation. Using paddle-type mixer, add Phase C. Cool to 40C and add Phase D. Cool to room temperature, mixing until smooth.

After Sun Moisturizer

	<u>% Weight</u>
Phase A:	
Water	56.05
Polyacrylamide	0.15
Carbomer-940 (Carbopol 940, 2% Solution)	15.00
Phase B:	
Wheat Germ Oil Fatty Acids (and) Wheat Germ Oil (and) Tocopherol (EFA-Plex WGOFA)	0.30
Stearic Acid	1.70
Cetyl Alcohol	3.00
Lanolin Oil (Ivarlan 3100)	2.00
Sorbitan Sesquioleate (Liposorb SQO)	2.00
Mineral Oil	9.00
C12-15 Alcohols Benzoate (Finsolv TN)	2.50
Phase C: Glycerin	3.00
Tissue Respiratory Factors (Biodynes TRF)	0.70
Phase D: Germaben II	1.00
Water	3.00
Potassium Hydroxide	0.30
Tetrasodium EDTA	0.10
Phase E: Fragrance	0.20

In main vessel, melt Phase B materials at 70C. In side vessel dissolve the polyacrylamide at 75C. Add Carbopol solution to complete Phase A, mix until uniform. Add Phase A to Phase B with rapid agitation. Cool to 50C with sweep agitation. Add Phase C and mix until uniform. Combine Phase D, add to batch. Cool to room temperature, Add Phase E.

SOURCE: Sutton Laboratories; Suggested Formulations

**Protective Skin Product with Sunscreen**

An excellent protective product for daily use on face or other exposed skin areas.

<u>Materials:</u>	<u>Parts/Wt(%)</u>
Part A:	
SF1202	12.0
Mineral Oil (light)	1.0
Heliopan AV	5.0
SS4267	3.0
SF1228	10.0
Lanolin	0.5
TiO <sub>2</sub> (micronized)	3.0
Part B:	
Polysorbate 80	0.2
Glycerine	3.0
NaCl	1.0
Water	61.2
Dowicil 200	0.1

**Procedure:**

- 1) Add Part A ingredients in order as shown, thoroughly mixing each component until homogeneous before adding next ingredient. The solution should remain clear until TiO<sub>2</sub> is added.
- 2) Mix all ingredients of Part B together.
- 3) Add Part B to Part A with good mixing gradually increasing agitation to high shear as mixture thickens. Continue agitation for 5-10 minutes. Mixture will become very thick.
- 4) Mill on homogenizer for 1-2 minutes.

SOURCE: GE Silicones: Formulation SP107

**Sunscreen Cream**

<u>Phase A:</u>	<u>% Weight</u>
Octyl Methoxycinnamate (Neo Heliopan AV)	7.50
Menthyl Anthranilate (Neo Heliopan MA)	5.00
Cyclomethicone (Dow Corning 344 Fluid)	2.00
Cetyl Octanoate (Trivent OC-16)	4.00
PVP/Eicosene Copolymer (Ganex V-220)	3.00
Polyethylene (AC Polyethylene 617A)	2.00
Cetearyl Alcohol (Lanette O)	0.50
PEG-40 Stearate (Myrj 52S)	0.50
Acrylates/C10-30 Alkyl Acrylate Cross Polymer (Pemulen TR-1)	0.25
Tocopheryl Acetate (Vitamin E Acetate)	0.10
Phase B: Water	59.75
Carbomer-980, 2% Solution (Carbopol 980)	10.00
Propylene Glycol	3.00
Aloe Vera Gel	1.00
Phase C: Triethanolamine, 99%	0.40
Phase D: Germaben II-E	1.00

**Procedure:**

In a suitable vessel weigh Phase A, heat to 75°C and completely disperse Pemulen TR-1. In another vessel able to contain the entire batch, weigh Phase B and heat to 75°C with agitation. Mix until uniform, and start cooling with continuous agitation. Cool to 40°C and add Phase D. Continue cooling with agitation to 25-28°C, pass thru a mill and package.

SOURCE: Sutton Laboratories: Suggested Formulation

Sprayable Sunscreen

<u>Ingredients:</u>	<u>% by weight</u>
Part A:	
Deionized Water	79.20
Glycerin	3.00
AMP-95	0.12
Part B:	
Octyl Methoxy Cinnamate	7.00
Octyl Salicylate	3.00
Oxybenzone	2.00
C12-15 Alcohols Benzoate	4.00
Oleth-10	0.08
Sorbitan Oleate	0.05
Dimethicone, 100 cs.	0.50
Pemulen TR-2	0.15
Part C:	
Propylene Glycol (and) Diazolidinyl Urea (and)	
Methylparaben (and) Propylparaben	0.80
Disodium EDTA	0.10

Procedure:

Combine A ingredients in a vessel which will contain the entire formulation. In a separate vessel, combine all B ingredients except dimethicone and Pemulen. Heat to 45-50C to hasten dissolution of oxybenzone. Discontinue heating and add Pemulen. Mix to obtain a smooth dispersion. Add dimethicone. Add B to A with rapid agitation. Continue mixing to obtain a smooth emulsion. Add C. Disodium EDTA should be added incrementally such that a Brookfield viscosity of 500-1000 cps is achieved.

Formulation PF-0230 suggested by B.F. Goodrich

Suntan Cream

<u>Ingredients:</u>	<u>% by weight</u>
Stearic acid, triple-pressed	4.50
Cetyl Alcohol	0.90
Mineral Oil	4.75
Pur-Cellin liquid	5.00
Pur-Cellin solid	0.25
Prosolal S9	1.00
Super Sat AWS-4	2.00
AMP-95	0.90
Carbopol 934	0.20
Deionized water	69.75
Preservative	q.s.
Perfume	q.s.

Formulation PF-0105 suggested by Dragoco, Inc.

SOURCE: Angus Chemical Co.: Suggested Formulations

Sun CareSuntan Oil(51485A)

This formula produces an essentially colorless, transparent oil. It spreads evenly and does not leave a greasy feel on the skin.

Drakeol 7, Light Mineral Oil USP	63.7wt%
Isopropyl Palmitate	28.8
Sunscreen	5.0
Wheat Germ Oil	2.5
Fragrance	q.s.

Blend all ingredients at room temperature and package.

Suntan Lotion(514127A)

This lotion is thick and very smooth, with emollient characteristics in addition to its sun screening properties. It goes on smoothly with a nice cushion and leaves a fine moisturizing coating on the skin.

Part A:	
Drakeol 7, Light Mineral Oil USP	18.0wt%
Penreco Snow, White Petrolatum USP	12.0
Glyceryl Stearate	7.0
White Beeswax	3.0
Sunscreen	2.0
Part B:	
Deionized water	58.9
Thickening agent	0.1
Part C:	
Preservatives	q.s.
Fragrance	q.s.

Disperse the thickening agent in the water at 70C. Separately, blend the ingredients in Part A and heat the mixture to 75C. When Part A is uniform, add Part B to Part A and continue to mix until the blend has cooled to room temperature. Add fragrance and preservatives at 45C.

SOURCE: Penreco: Penreco Cosmetics Formulary

Sun Protection Cream (O/W) SPF 5

<u>Ingredients:</u>	<u>% by weight</u>
A. PEG-1 Glyceryl oleostearate and paraffin wax	6.00
Mineral oil high viscosity	14.50
Beeswax, white	3.00
Dimethicone, 100 cs	2.00
Tocopherol acetate	0.50
B. Phenyl benzimidazole sulfonic acid	1.50
C. Tris(hydroxymethyl)aminomethane	0.66
D. Water, demineralized	qs 100.00
E. Glycerin	2.00
Magnesium sulfate heptahydrate	0.70
Preservatives	q.s.

Procedure:

To neutralize B, dissolve C in D. Add B while stirring. When uniform, add E; heat to 80C. Heat A to 75C. Add BCDE slowly to A, stirring gently. Homogenize. Cool while stirring. Add fragrance at 40C, as required. Note: Viscosity 76,000 mPas at 26C.

SOURCE: Angus Chemical Co.: Formulation PF-0221 Suggested by EM Industries, Inc.

Sunscreen Oil

In this formula, Macol 57 and Mazon EE-1 solubilize the actives and reduce the greasiness of the oil. Macol 57, due to its relatively polar structure, helps to offset the hypsochromic shift ("blue shift") in the lambda-max caused by the mineral oil.

<u>Ingredient:</u>	<u>Trade Name:</u>	<u>Wt. %</u>
Benzyl Laurate	Mazon EE-1	20.0
PPG-10 Butanediol	Macol 57	8.0
Homosalate	Uniderm Homsal	8.0
Ethylhexyl p-Methoxycinnamate	Parsol MCX	3.0
Fragrance		Q.S.
Mineral Oil	Drakeol 7	61.0
Appearance: Clear, water-white light oil		

Procedure:

Blend the first four ingredients at ambient temperature, add fragrance. When uniform, blend in the mineral oil.

SOURCE: PPG Industries, Inc.: Formula L-104

**Sun-Protection-Gel (Aqueous)**

<b><u>Ingredients:</u></b>	<b><u>% by weight</u></b>
A. Eusolex 232	4.00
Tris Amino brand of tris(hydroxymethyl)aminomethane	1.77
Allantoin	0.20
Sorbitol F liquid	5.00
Preservatives	q.s.
Water, Demineralized	ad 100.00
B. Perfume 72979	0.30
PEG-35 Hydrogenated Castor Oil	0.60
C. Carbopol 940	1.50
Water, Demineralized	36.10
D. Tris Amino	2.40
Water, Demineralized	10.00

**Procedure:**

To neutralize Eusolex 232 dissolve Tris Amino in the water of Phase A and add Eusolex 232 while stirring. When uniform add the remaining ingredients of Phase A. Heat to 70C until homogeneous and cool while stirring. Blend ingredients of Phase B. Disperse Carbopol 940 in the water of phase C and homogenize. Dissolve the Tris Amino in the water of phase D. Combine phases C and D and homogenize. Incorporate phases A and B. Homogenize again.

**Note:** Transparent Gel

Viscosity: 35,000 mPas at 25C

pH: 6.7

Formulation PF-0171 suggested by EM Industries, Inc.

**Sun-Protection Cream (O/W)**

**SPF-5 (sun protection factor, FDA-method with 5 human subjects)**

<b><u>Ingredients:</u></b>	<b><u>% by weight</u></b>
A. PEG-1 Glyceryl Oleostearate + Paraffin Wax	6.00
Mineral Oil High Viscosity	14.50
Beeswax, white	3.00
Dow Corning 200 (100 cs)	2.00
Tocopherol acetate	0.50
B. Eusolex 232	1.50
Tris Amino brand of tris(hydroxymethyl)aminomethane	0.66
Glycerine	2.00
Magnesium sulfate heptahydrate	0.70
Preservatives	q.s.
Water, demineralized	to 100.00

**Procedure:**

To neutralize Eusolex 232 dissolve Tris Amino in the water of Phase B and add Eusolex 232 while stirring. When uniform add the remaining ingredients of phase B and heat to 80C. Heat phase A to 75C. Add phase B slowly to phase A while gently stirring. Homogenize. Cool down while stirring and add perfume at 40C as required.

**Note:** Viscosity 76,000 mPas at 26C

Formulation PF-0174 suggested by EM Industries, Inc.

**SOURCE:** Angus Chemical Co.: Suggested Formulations



Sun Protection Lotion-A

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Cetyl Dimethicone Copolyol (Abil EM-90)	2.0
Mineral Oil	9.0
Caprylic/Capric Triglycerides (Tegosoft CT)	8.0
Octyl Stearate (Tegosoft OS)	6.0
Synthetic Wax	1.2
Hydrogenated Castor Oil	0.8
Phase B:	
Octyl Methoxycinnamate	5.0
Titanium Dioxide	5.0
Phase C:	
Water	62.3
Sodium Chloride	0.7
Fragrance	Q.S.
Preservatives	Q.S.

Sun Protection Lotion-B

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Cetyl Dimethicone Copolyol (Abil EM-90)	2.0
Mineral Oil	8.0
Caprylic/Capric Triglycerides (Tegosoft CT)	6.0
Octyl Stearate (Tegosoft OS)	3.0
Synthetic Wax	1.2
Hydrogenated Castor Oil	0.8
Phase B:	
Octyl Methoxycinnamate	12.0
Titanium Dioxide	5.0
Phase C:	
Water	61.3
Sodium Chloride	0.7
Fragrance	Q.S.
Preservatives	Q.S.

Procedure:

1. Mix the ingredients of Phase A together and heat to 80C. Mix until uniform.
2. Cool Phase A to 25C. Add the actives of Phase B. Mill until uniform.
3. Mix Phase C (20-25C). Slowly add to the milled Phase A/B with slow mix. At all times maintain a creamy appearance.
4. Homogenize.

Note:

Waterproofing polymers may be added to this formula.

SOURCE: Goldschmidt Chemical Corp.: Suggested Formulations

Sun Protection Lotion

<u>Ingredients:</u>	<u>%w/w</u>
Phase A:	
Cetyl Dimethicone Copolyol (Abil EM-90)	2.0
Mineral Oil	9.0
Carylic/Capric Triglycerides (Tegosoft CT)	8.0
Octyl Stearate (Tegosoft OS)	6.0
Synthetic Wax	1.2
Hydrogenated Castor Oil	0.8
Phase B:	
Octyl Methoxycinnamate	5.0
Titanium Dioxide	5.0
Phase C:	
Water	62.3
Sodium Chloride	0.7
Fragrance	Q.S.
Preservatives	Q.S.

Sun Protection Lotion

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Cetyl Dimethicone Copolyol (Abil EM-90)	2.0
Mineral Oil	8.0
Caprylic/Capric Triglycerides (Tegosoft CT)	6.0
Octyl Stearate (Tegosoft OS)	3.0
Synthetic Wax	1.2
Hydrogenated Castor Oil	0.8
Phase B:	
Octyl Methoxycinnamate	12.0
Titanium Dioxide	5.0
Phase C:	
Water	61.3
Sodium Chloride	0.7
Fragrance	Q.S.
Preservatives	Q.S.

**Procedure:**

1. Mix the ingredients of Phase A together and heat to 80C. Mix until uniform.
2. Cool Phase A to 25C. Add the actives of Phase B. Mill until uniform.
3. Mix Phase C (20-25C). Slowly add to the milled Phase A/B with slow mix. At all times maintain a creamy appearance.
4. Homogenize.

Note: Waterproofing polymers may be added to this formula.

**SOURCE:** Goldschmidt Chemical Corp.: Suggested Formulas

Sunscren Cream with TiO<sub>2</sub>(514128)

This light, fluffy product goes on easily without leaving a white film or a greasy feel on the skin.

Part A:	
Penreco Snow, White Petrolatum USP	6.00wt%
Sorbitan Sesquiolate	5.00
Mineral Oil (and) Lanolin Alcohol	5.00
Drakeol 9, Light Mineral Oil USP	2.00
Laneth-16 (and) Ceteth-16 (and) Oleth-16 (and)	
Steareth-16	1.00
Part B:	
Deionized water	74.25
Titanium dioxide	5.00
Thickening agent	1.75
Part C:	
Fragrance and preservatives	q.s.

Disperse the titanium dioxide in the water at 70C with vigorous stirring. Add the thickening agent. Separately, heat Part A to 70C until homogeneous. Add Part A to Part B with stirring. Let the blend cool to room temperature with stirring. At 45C, add Part C.

Sunscren Lotion Containing TiO<sub>2</sub>(514118)

Part A:	
Deionized water	74.90wt%
Glycerin	3.00
Methylparaben	0.20
Propylparaben	0.10
Citric Acid	0.10
Part B:	
Titanium dioxide	4.50
Hydroxyethylcellulose	0.80
Part C:	
Drakeol 7, Light Mineral Oil USP	11.20
Emulsifying Wax	3.50
Cetyl Alcohol	1.00
Dimethicone, 200 cSt	0.50
Vitamin E Acetate	0.20

Heat Part C to 70C with stirring. Add well-mixed Part B to Part C very slowly with vigorous stirring. Stir until smooth. Heat Part A to 70C. Add hot BC to A with rapid stirring. Stir complete mixture at 65-70C for 15 minutes, then cool to room temperature with stirring. If desired, add fragrance at 40C.

SOURCE: Penreco: Penreco Coemetic Formulary

**Sunscreen Gel**

	<u>% Weight</u>
Phase A:	
Water	10.80
Carbomer-940, 2% Solution (Carbopol 940)	55.00
SD Alcohol 39-C	5.00
Propylene Glycol	5.00
Propylene Glycol (and) Ethoxydiglycol (and) Aloe Extract (Cremogen Aloe Vera)	2.00
Germaben II	1.00
Phase B:	
Water	10.00
Triethanolamine, 99%	2.20
Panthenol (DL-Panthenol)	0.50
Phase C:	
Phenylbenzimidazole Sulfonic Acid (Neo Heliopan Hydro)	6.70
Phase D:	
Fragrance	0.30
PPG-2-Isodeceth-12 (Sandoxylate SX-424)	1.50

**Procedure:**

In a suitable vessel able to contain the entire batch, weigh Phase A and mix until uniform. Slowly add Phase B and mix until uniform. Add Phase C and mix until uniform. Add Phase D, (slightly heated) and mix until uniform.

**Sunscreen Moisturizing Cream**

	<u>% Weight</u>
Phase A:	
Polyglyceryl-3 Beeswax (Cera Bellina)	6.00
Light Mineral Oil	6.00
Octyl Dimethyl PABA (Escalol 507)	5.10
Mineral Oil (and) Lanolin Alcohol (Amerchol L-101)	5.00
Castor Oil	3.00
Glycerin	2.00
Isopropyl Palmitate	2.00
Ozokerite 160/164	1.00
Dimethicone (Dow Corning 200 Fluid)	1.00
Phase B:	
Water	64.70
Butylene Glycol	3.00
Sodium Borate	0.20
Phase C:	
Germaben II	1.00

**Procedure:**

Heat Phase B to 75C under agitation insuring that the entire phase is solubilized. Melt and mix Phase A until homogeneous and a temperature of 75C is maintained. Slowly add Phase A to Phase B under vigorous stirring. Allow to cool to 50C and add Phase C. Cool to 35C and package.

**SOURCE:** Sutton Laboratories: Suggested Formulations

Sunscreen-High SPF\* Formulation

<u>Phase:</u>	<u>Ingredients:</u>	<u>% by Weight</u>
A	Water, Deionized	61.32
A	Aculyn 33	3.33
A	Propylene Glycol	2.00
A	Tetrasodium EDTA	0.10
B	Neoheliopan AV	7.50
B	Benzophenone-3	6.00
B	Octocrylene	8.00
B	Finsolv TN	2.00
B	Ganex V-220	3.00
B	DC 344	2.00
B	Myrj 52S	1.50
B	Promulgen D	1.50
C	Triethanolamine 99%	0.75
D	Preservative	1.00

**Manufacturing Instructions:**

Heat phase A to 75C, heat phase B to 75C, add phase B to phase A, add phase C and cool to 45C and add phase D.

Viscosity: 34,000

pH: 7.7

\* SPF calculated, not clinically tested

Waterproof Sunscreen\* Formulation

<u>Phase:</u>	<u>Ingredients:</u>	<u>% by Weight</u>
A	Water, Deionized	63.45
A	Aculyn 22	2.00
A	Aculyn 33	2.00
A	Propylene Glycol	1.00
B	Isopropyl Myristate	5.00
B	DC 344	1.00
B	Cetearyl Alcohol	1.00
B	Amphisol (DEA Cetyl Phosphate)	4.00
B	Neoheliopan AV	7.50
B	Benzophenone-3	6.00
B	Macadamia Nut Oil	5.00
B	Vitamin E Acetate	0.05
C	Preservative	2.00

**Manufacturing Instructions:**

Heat phase A to 75C, heat phase B to 75C, add phase B to phase A, add phase C and cool to 45C.

\*Not clinically tested

This formulation has good pickup and rub out characteristics and does not leave a tacky feeling to the skin.

SOURCE: Rohm and Haas Co.: Suggested Formulations

Sunscreen Lotion

<u>Part</u>	<u>Ingredient:</u>	<u>Wt. %</u>
A	Methyl Stearoxy Dimethicone	Masilwax 135 4.0
	Octyl Dimethyl PABA	Escalol 507 4.0
	Octyl Salicylate	Sunarome WMO 3.0
	Isopropyl Palmitate	Lexol IPP 1.0
	Cetyl Alcohol	CO-1695 1.0
	Ethylene Glycol Monostearate	Mapeg EGMS 1.0
	Stearic Acid	Emersol 132 1.0
	Cetearyl Alcohol (and)	
	Ceteareth 20	Macol 124 3.0
B	Deionized Water	78.2
	Hydroxypropyl Methylcellulose	Methocel 40-100 0.2
	Sorbitol	Sorbitol Solution 3.0
	Preservative, EDTA	0.4
	Triethanolamine	0.2

pH: 6.5-7.0

Viscosity: 59,800 cps

Appearance: Glossy white lotion

Performance: Non-greasy, smooth feel

Procedure:

Pre-mix Part A; heat to 55C. Pre-mix Part B; heat to 55C. Add Part A to B with high shear. Sweep-cool to 35C. If necessary, adjust pH with 50% citric acid in water.

Formulation I-102

Sunscreen Oil

<u>Ingredient:</u>	<u>Wt. %</u>
Cyclomethicone	Masil SF-V 64.9
Octyl Dimethyl PABA	Escalol 507 6.0
Capric/Caprylic Triglyceride	Mazol 1400 5.0
Fragrance	0.1
Isopropyl Palmitate	Propal 24.0

Appearance: Clear, water-white

Performance: A light oil which spreads rapidly and leaves a uniform, non-oily film

Procedure:

Blend all ingredients at room temperature.

Formulation L-102

SOURCE: PPG Industries, Inc.: Suggested Formulations

Sunscreen Lotion

<u>Part:</u>	<u>Ingredient:</u>	<u>Wt. %</u>
A	Methoxy Stearoy Dimethicone	Masilwax 135 4.0
	Octyl Dimethyl PABA	Escalol 507 4.0
	Octyl Salicylate	Sunarome WMO 3.0
	Isopropyl Palmitate	Lexol IPP 1.0
	Cetyl Alcohol	CO-1695 1.0
	Ethylene Glycol Monostearate	Mapeg EGMS 1.0
	Stearic Acid	Emersol 132 1.0
	Cetearyl Alcohol (and) Ceteareth 20	Macol 124 3.0
	Deionized Water	78.2
B	Hydroxypropyl Methylcellulose	Methocel 40-100 0.2
	Sorbitol Sorbitol Solution	3.0
	Preservative, EDTA	0.4
	Triethanolamine	0.2
pH: 6.5-7.0		
Viscosity: 59,800 cps		
Appearance: Glossy white lotion		
Performance: Non-greasy, smooth feel		
Pre-mix Part A; heat to 55C. Pre-mix Part B; heat to 55C. Add Part A to B with high shear. Sweep-cool to 35C. If necessary, adjust pH with 50% citric acid in water.		
SOURCE: PPG Industries, Inc.: Formula I-102		

Cooling Suntan Lotion

<u>Phase A:</u>	<u>% Weight</u>
Octyl Methoxycinnamate (Neo Heliopan AV)	3.00
Octyldodecanol (Eutanol G)	4.50
PEG-5 Glyceryl Stearate (Arlatone 983S)	2.00
Mineral Oil (Drakeol 7)	2.00
Isopropyl Myristate	2.00
Steareth-10 (Brij-76)	2.00
Menthyl Lactate (Frescolat)	2.00
Cetearyl Alcohol (Lanette O)	1.50
Phase B:	
Water	75.50
Carbomer-934 (Carbopol 934)	0.30
Propylene Glycol	3.00
Phase C:	
Sodium Hydroxide, 10% Solution	1.20
Phase D:	
Germaben II-E	1.00
Fragrance	Q.S.
<u>Procedure:</u>	

In a suitable vessel weigh Phase A and heat to 75C with agitation. In another vessel able to contain the entire batch, weigh water and completely disperse Carbopol 934 with vigorous agitation. Add the remaining ingredients in Phase B and heat to 75C with agitation. Slowly add Phase A to Phase B, mix for 10 minutes and add Phase C. Mix until uniform and start cooling with agitation. Cool to 40C and add Phase D. Continue cooling with agitation to 25-28C and package.

SOURCE: Sutton Laboratories: Suggested Formulation

**Sun Screen Oil**

This preparation contains a quantity of sun screen agent. It must be noted that the Food and Drug Administration, in its monograph referring to over-the-counter sun screen drug products, has concluded that over-exposure to the sun may lead to premature aging, as well as other negative conditions.

<u>Ingredients:</u>	<u>% W/W</u>
1. Isopropyl Myristate	10.00
2. Ritalan	3.00
3. Ritacetyl	1.75
4. Ritawax AEO	5.00
5. Mineral Oil	72.15
6. Propylparaben	0.10
7. Fragrance	QS
8. Homo Menthyl Salicylate	8.00

**Compounding Procedure:**

Weigh and add all ingredients with the exception of the fragrance and Homo Menthyl Salicylate into a container and begin stirring. Heat while stirring continuously to a temperature of 67-72C. Hold at this temperature for about 20 minutes, stirring until all ingredients dissolve. Begin cooling. Cool to 40-43C and add the remaining ingredients. Cool to 25-30C and package fill into suitable containers.

Formulation HB-89-L-23

**Sun Screen Gel**

This Acritamer-based gel has Ritalan and Patlac IL to prevent the skin from drying. NOTE: All sun screen products must be checked to comply with the OTC monograph.

<u>Ingredients:</u>	<u>% W/W</u>
1. Ritalan	5.00
2. PEG-32	3.00
3. Octyl Dimethyl PABA	3.00
4. Patlac IL	1.00
5. Acritamer 934	0.60
6. Distilled Water	+56.20
7. Triethanolamine (50%)	1.20
8. SD Alcohol 40	30.00
9. Color, Fragrance, Preservative	QS

**Compounding Procedure:**

Disperse item 5 into item 6 and heat to 70C. Combine items 1-4 and heat to 70C. Combine both phases with mixing. Add item 7. Cool with mixing to 40C. Add remaining ingredients.

Formulation HB-89-L-24

SOURCE: R.I.T.A. Corp.: Suggested Formulations



Sunscreen Oil

In this formula, Macol 57 and Mazon EE-1 solubilize the actives and reduce the greasiness of the oil. Macol 57, due to its relatively polar structure, helps to offset the hypsochromic shift ("blue shift") in the lambda-max caused by the mineral oil.

<u>Ingredient:</u>		<u>Wt. %</u>
Benzyl Laurate	Mazon EE-1	20.0
PPG-10 Butanediol	Macol 57	8.0
Homosalate	Uniderm Homsal	8.0
Ethylhexyl p-Methoxycinnamate	Parso1 MCX	3.0
Fragrance		Q.S.
Mineral Oil	Drakeol 7	61.0
Appearance: Clear, water-white light oil		

Procedure:

Blend the first four ingredients at ambient temperature, add fragrance. When uniform, blend in the mineral oil.

SOURCE: PPG Industries, Inc.: Formulation L-104

Sun Stick

This product in stick form will serve as a moisturizer for the skin and will give an oil-free smooth coverage of sunscreen which stay effective for a time span.

	<u>% (w/w)</u>
Sodium Stearate C-1	10.00
Glycerine	69.00
Lexquat AMG-0	10.00
Amerscreen P	6.00
SDA-40 (200 P.)	5.00

Procedure:

Charge the batch vessel with glycerine. Begin mixing and heating to 78C+-2C. Add the sodium stearate C-1 and let it mix. Add the Amerscreen P with mixing. Add the Lexquat AMG-0 and continue mixing. Begin to cool. At 45C, add the alcohol. Continue mixing at this temperature for 10 minutes, then pour into the mold.

SOURCE: Inolex Chemical Co.: Formulation SN-100

**Sunscreen**  
**O/W with Ethanol**

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Steareth-25 (Emulgator E-2568)	2.5
Glyceryl Stearate (Tegin M)	5.5
Cetyl Dimethicone (Abil Wax 9801)	3.0
Dimethicone (Abil 350)	0.5
Stearyl Alcohol	2.5
Benzophenone-3	2.0
Octyl Methoxycinnamate	4.0
Mineral Oil	5.0
Decyl Oleate (Tegosoft DO)	6.5
Phase B:	
Glycerin	3.0
Carbomer 934 (1.5% - NaOH Neutralized)	0.2
Water	55.3
Preservatives	Q.S.
Phase C:	
SD Alcohol 40	10.0
Fragrance	Q.S.

**Procedure:**

1. Combine the ingredients of Phase A. Heat to 80C.
2. Combine the ingredients of Phase B. Heat to 80C.
3. Mix Phases A & B. Cool to 60C while mixing. Homogenize.
4. Cool to 45C with sweep mix.
5. Add Phase C. Rehomogenize. Cool to 25C with sweep mix.

**Titanium Dioxide Sunscreen**

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Octyl Isostearate	12.0
Cetyl Dimethicone Copolyol (Abil EM-90)	2.5
Mineral Oil	13.0
Hydrogenated Castor Oil	0.5
Synthetic Wax	1.0
Phase B:	
Titanium Dioxide	8.0
Phase C:	
Water	62.3
Sodium Chloride	0.7
Fragrance	Q.S.
Preservatives	Q.S.

**Procedure:**

1. Mix the ingredients of Phase A together and heat at 80C. Mix until uniform.
2. Cool Phase A to 25C. Add the actives of Phase B. Mill until uniform.
3. Mix Phase C (20-25C). Slowly add to the milled Phase A/B with slow mix. At all times maintain a creamy appearance.
4. Homogenize.

**Note:** Waterproofing polymers may be added to this formula.

**SOURCE:** Goldschmidt Chemical Corp.: Suggested Formulations

Suntan Lotion

This formulation contains Ritaderm for its lipid layer-related attributes, as well as its natural moisturizing factor-like properties. Thus, Ritaderm functions to help protect the skin against negative environmental influence, such as sun, wind, cold and water by imparting moisturizing benefits that assist in maintaining the normal moisture content of the stratum corneum. The lotion is an easily applied oil/water emulsion that "rubs in" quickly, leaving the skin soft and smooth to the touch.

This sun screen preparation is based on the use of Para Amino Benzoic Acid. Based on current regulations, this formulation should be considered a drug item. The SPF (sun protection factor) for this product should be determined by "in vivo" methods to be used on the label.

Ingredients:

	<u>% W/W</u>
1. Distilled Water	72.50
2. Acritamer 941	0.10
3. Propylene Glycol	3.00
4. Methylparaben	0.20
5. Isopropyl Myristate	5.00
6. Ritaderm	5.00
7. Ritacetyl	2.50
8. Ritalan	1.00
9. Cetyl Alcohol	0.70
10. Glyceryl Stearate	1.50
11. Stearic Acid	2.00
12. Mineral Oil	2.00
13. Octyl Dimethyl Paba	2.50
14. Propylparaben	0.10
15. Triethanolamine (50%)	1.60
16. Fragrance	QS
17. Imidazolidinyl Urea	0.30

Compounding Procedure:

Add item 1 into a container and stir by means of a variable speed agitator equipped with a stirrer capable of imparting high shear. Slowly sprinkle in item 2 and stir until it is thoroughly dispersed and no lumps can be seen or felt. Add items 3 and 4 and heat to 70-73C, with stirring, add item 15 to the first blend until completely dispersed. When both blends are at 70-73C, add the first blend to the second blend, stirring continuously to ensure adequate emulsification. After all of the first blend has been added, cool to 40-45C and add the remaining ingredients. Cool to 25-30C and package.

SOURCE: R.I.T.A. Corp.: Formulation H-89-A-6

Suntan Lotion

This lotion will moisturize the skin while providing sunburn protection. Pationic ISL and Glycerin moisturize. Shebu provides emollience which adds to the UV protection.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	77.40
2. Acritamer 934	0.20
3. Glycerin	4.00
4. Xanthan Gum	0.10
5. Supersat	0.50
6. Shebu	2.00
7. Glyceryl Stearate	1.00
8. Octyl Dimethyl PABA	2.00
9. Mineral Oil	7.00
10. Pationic ISL	2.00
11. Stearic Acid	2.00
12. Triethanolamine (50%)	1.80
13. Color, Fragrance and Preservatives	QS

Compounding Procedure:

Disperse item 2 into item 1, add items 3 and 4 and heat to 70C. Combine items 5-11, heat to 70C. Combine both phases, add item 12; cool with mixing to 40C, add remaining ingredients.

Note:

The above provides a minimum of protection. Other sunscreens can be used to obtain better protection and testing must be done to claim a specific SPF.

Formulation HB-89-S-1

Bronzer Gel

A clear gel that imparts color to the skin.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	76.00
2. Acritamer 934	1.00
3. Glycerin	16.00
4. Ritoleth 20	3.00
5. Supersat AWS 4	2.00
6. Triethanolamine (50%)	2.00
7. FDA Approved Dye Solutions	QS
8. Fragrance and Preservatives	QS

Compounding Procedure:

Disperse the Acritamer in water and Glycerin. Combine and melt the Ritoleth 20 and Supersat AWS4 and add to batch while stirring. Add correct dye solution-Recheck for color. Add items 6 and 8 and mix until uniform.

Formulation H-89-A-13

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Tanning Accelerator Formulation

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Distilled Water	39.70
2. Ritaloe 1X	41.50
3. Acritamer 940	0.10
Part B:	
4. Ritapro 300	2.00
5. Octyl Dimethyl PABA	1.50
6. Simchin	3.00
7. Pationic ISL	3.50
8. Shebu	2.00
9. Supersat AWS 4	2.00
10. Stearic Acid XXX	1.00
11. Rita GMS	2.00
Part C:	
12. DL Panthenol	1.00
13. Triethanolamine (50%)	0.70
14. Preservative	QS
15. Color	QS

Compounding Procedure:

Weigh items 1 and 2 into mixing container. Slowly add item 3 into rapidly mixing blend. Stir until completely dispersed. Weigh items 4 through 11 into another container. Heat both phases to 70C. Pour Part A into Part B. Add item 12 and mix. Add item 13 and mix. Cool mixture to 45C, then add items 14 and 15. Cool to 35C. Fill into suitable containers.

Note: 2.0% Tyrosine may be added to further promote more rapid tanning.

Formulation H-89-S-12

Tanning Oil

This oil will give sunburn protection and will keep the skin soft and smooth. The combined protection of Octyl PABA and Shebu will help prevent burning. Check OTC monograph before marketing any sun product.

<u>Ingredients:</u>	<u>% W/W</u>
1. Ritalan C	7.00
2. Pationic ISL	2.00
3. Ritacetyl	1.75
4. Shebu	3.00
5. Mineral Oil	84.25
6. Octyl Dimethyl PABA	2.00
7. Color, Fragrance and Preservative	QS

Compounding Procedure:

Combine and heat ingredients 1-5 to 50C. Mix until uniform. Allow to cool to 40C. Add remaining ingredients, mix until uniform.

Formulation HB-89-S-11

SOURCE: R.I.T.A. Corp.: Suggested Formulations

**Titanium Dioxide Based Waterproof Sunscreen**  
**(SPF 12)**

<b><u>Ingredients:</u></b>	<b><u>% by weight</u></b>
Part A:	
Deionized Water	67.80
Propylene Glycol	5.00
Hydroxypropyl Methylcellulose	0.10
Aminomethyl Propanol	0.25
Disodium EDTA	0.05
Propylene Glycol (and) Diazolidinyl Urea (and)	
Methylparaben (and) Propylparaben	0.30
Part B:	
C12-15 Alcohols Benzoate	3.00
Butyl Stearate	3.00
Myristyl Myristate	4.00
Sorbitan Oleate	0.10
Pemulen TR-1	0.20
Carbopol 2984	0.20
Part C: Octyl Palmitate (and) Titanium Dioxide	15.00
Polyglyceryl-10 Decaoleate	1.00
1. Combine Part A ingredients in a vessel which will contain the entire formulation. Heat to 50C.	
2. In a separate vessel, combine Part B ingredients. Heat to 50C.	
3. Using rapid agitation, add Part B to Part A. Mix to form a smooth, viscous emulsion.	
4. Using moderate agitation, <u>slowly</u> add Part C to the emulsion. Slowly cool lotion using continued moderate agitation.	
Formulation PF-0179 suggested by BF Goodrich	

**Titanium Dioxide Based Waterproof Sunscreen (SPF12)**

<b><u>Ingredients:</u></b>	<b><u>% by weight</u></b>
Part A:	
Deionized Water	67.80
Propylene Glycol	5.00
Hydroxypropyl Methylcellulose	0.10
AMP-95	0.25
Disodium EDTA	0.05
Propylene Glycol (and) Diazolidinyl Urea (and)	
Methylparaben (and) Propylparaben	0.30
Part B:	
C12-15 Alcohols Benzoate	3.00
Butyl Stearate	3.00
Myristyl Myristate	4.00
Sorbitan Oleate	0.10
Pemulen TR-1	0.20
Carbopol 2984	0.20
Part C: Octyl Palmitate (and) Titanium Dioxide	15.00
Polyglyceryl-10 Decaoleate	1.00
Combine A ingredients in a vessel which will contain the entire formulation. Heat to 50C. In a separate vessel, combine B ingredients. Heat to 50C. Using rapid agitation, add B to A. Mix to form a smooth, viscous emulsion. Using moderate agitation, slowly add C to the emulsion. Slowly cool lotion using continued moderate agitation.	

Formulation PF-0229 suggested by BF Goodrich

**SOURCE: Angus Chemical Co.: Suggested Formulations**

### Waterproof Sun Protection Lotion SPF-18

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Cetyl Dimethicone Copolyol (Abil EM-90)	2.0
Mineral Oil	3.0
Caprylic/Capric Triglyceride (Tegosoft CT)	8.0
Octyl Stearate (Tegosoft OS)	6.0
Synthetic Wax	1.2
Hydrogenated Castor Oil	0.8
Cetyl Dimethicone (Abil Wax 9801)	1.0
Phase B:	
Octyl Methoxycinnamate	5.0
Titanium Dioxide	5.0
Cyclomethicone (Abil B 8839)	5.0
Phase C:	
Water	62.3
Sodium Chloride	0.7
Fragrance	Q.S.
Preservatives	Q.S.

Procedure:

1. Mix the ingredients of Phase A together and heat at 80C. Mix until uniform.
2. Cool Phase A to 25C. Add the actives of Phase B. Mill until uniform.
3. Mix Phase C (20-25C). Slowly add to the milled Phase A/B with slow mix. At all times maintain a creamy appearance.
4. Homogenize.

Note: Water proofing polymers may be added to this formula.  
Formula LB-27-111

### W/O Natural Sun Protection Lotion

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Cetyl Dimethicone Copolyol (Abil EM-90)	2.50
Octyl Palmitate (Tegosoft OP)	6.00
Mineral Oil	1.00
Octyl Stearate (Tegosoft OS)	1.50
Cetyl Dimethicone (Abil Wax 9801)	1.00
Hydrogenated Castor Oil	0.50
Beeswax	1.00
Cyclomethicone (Abil B 8839)	7.50
Phase B:	
Titanium Dioxide	8.00
Phase C:	
Water	70.40
Sodium Chloride	0.60
Preservatives	Q.S.
Fragrance	Q.S.

Procedure:

1. Add the components of Phase A. Heat while mixing to 80C to incorporate the waxes. Cool to 50C. (2) Heat Phase B to 50C. Add B to A slowly with a low energy mixer. Maintain a smooth milky appearance at all times. (3) Cool to 35C with sweep mixer. Add fragrance. (4) Homogenize.

SOURCE: Goldschmidt Chemical Corp.: Formulas

**Waterproof Sunscreening Cream (O/W)**  
**SPF 8**

A non-greasy, waterproof sunscreen preparation. The polymer provides a waterproof matrix for the sunscreen. The Pationics act as emulsifiers and improve the ease of application. The lactylates and Ritapro moisturize and condition the skin.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Octyl Dimethyl PABA	8.00
2. Stearic Acid	4.00
3. Cetyl Alcohol	1.00
4. Pationic ISL	3.00
5. Pationic SSL	3.00
6. PVP/Eicosene Copolymer	5.00
7. Dimethicone	0.30
8. Shebu Refined	3.00
Part B:	
9. Ritapro 300	2.50
Part C:	
10. Distilled Water	64.00
11. Glycerin	5.00
12. Acritamer 940	0.10
Part D:	
13. Distilled Water	1.00
14. Triethanolamine 99%	0.10
Part E:	
15. Perfume, Preservatives	QS

Heat Part A to 85C while mixing with planetary mixer. Then add Part B. Blend Acritamer into water and glycerin of Part C. Heat to 75C. When both are homogeneous, add Part B to Part C with mixing. Mix until uniform. Add Part D. Begin cooling, cool to 40C. Add Part E. Compensate for water loss, continue mixing until homogeneous, while cooling to 35C.

Formulation HB-89-S-2

**Body Spray After Sun Burn**

A simple body spray moisturizer to relieve dryness. May be used during or after sun exposure. Ritalan, glycerin and Panthenol soothe, condition and moisturize.

<u>Ingredients:</u>	<u>% W/W</u>
1. Ritaloe 1X	80.00
2. Glycerin	3.00
3. dl-Panthenol	0.50
4. Methylparaben	0.20
5. Distilled Water	16.30

Combine ingredients and stir until completely dissolved.

Formulation HB-89-PA-27

SOURCE: R.I.T.A. Corp.: Suggested Formulations



Water-Resistant Suntan Lotion

<u>Phase:</u>	<u>Ingredients:</u>	<u>Percent by Weight</u>
A	Deionized water	60.90
	Versene powder chelating agent	0.05
	Carbomer 934	0.15
B	Glycerin	3.00
	Propylene glycol	1.00
	Methylparaben	0.20
C	Ethylparaben	0.15
	Propylene glycol	2.00
	Xanthan gum	0.10
D	Solution of 10% Ethocel and diisopropyl adipate	10.00
	Mineral oil	10.00
	Glyceryl stearate	3.00
	Sorbitan stearate	1.00
	Stearic acid	2.00
	Dimethicone	0.50
	Octyl dimethyl PABA	1.50
	Petrolatum white	1.00
E	Cetyl alcohol	1.00
	Deionized water	1.00
	Triethanolamine	0.20
F	Deionized water	1.00
	Dowicil 200 preservative	0.10
G	Perfume oil	0.15

Procedure:

1. Meter deionized water into a compounding vessel and begin mixing without heat. Add Versene powder and mix until dissolved. Sprinkle in Carbomer and mix rapidly until dissolved. Start heating to 80C.
2. Mix together ingredients in phase B and heat to 80C to dissolve parabens. Add to water phase when water phase is above 60C.
3. Mix together ingredients in Phase C and add to water phase at about 60C. (Be sure that xanthan has been well wetted by the propylene glycol).
4. Mix together ingredients in Phase D. Heat to 80C with mixing. Add to water phase when both phases are at 80C. Mix for 5 minutes.
5. Mix together ingredients in Phase E. Add to batch and continue mixing for 10 minutes. Start to cool batch.
6. At 45C add Phase F solution.
7. At 45C add Perfume oil.
8. Continue to mix batch to 35C.

Some ideas you can try:

1. For a "lighter" feel, substitute a vegetable oil for the mineral oil in Phase D.
2. Try using an additive that would be helpful in product marketing, such as aloe vera or skin proteins.

SOURCE: Dow Chemical Co.: Suggested Formulations

**Waterproof High SPF Sun Protection Lotion**  
**(W/O Emulsion)**  
**SPF-18**

<b><u>Ingredients:</u></b>	<b><u>% w/w</u></b>
Phase A:	
Cetyl Dimethicone Copolyol (Abil EM-90)	2.0
Octyl Methoxycinnamate	7.0
Benzophenone-3	3.0
Octyl Palmitate (Tegosoft OP)	1.0
Hydrogenated Castor Oil	0.4
Beeswax	0.6
Octyl Stearate (Tegosoft OS)	7.0
Cetyl Dimethicone (Abil Wax 9801)	1.0
Mineral Oil	2.0
Phase B:	
Cyclomethicone (Abil B 8839)	6.0
Phase C:	
Sodium Chloride	0.6
Water	69.4
Preservatives	Q.S.
Fragrance	Q.S.
<b><u>Procedure:</u></b>	
1. Combine the ingredients of Phase A. Heat to 80C. Mix until the waxes are dispersed.	
2. Cool with stirring until 40-45C. Add the Cyclomethicone.	
3. Mix Phase C. Slowly add to Phase A/B with low energy stirring. Maintain a milky appearance at all times.	
4. Homogenize.	
5. Add fragrance with sweep mixer.	

Formula LB-27-109

**Waterproof Sun Protection Lotion**  
**(with 8% Titanium Dioxide)**  
**SPF-12**

<b><u>Ingredients:</u></b>	<b><u>% w/w</u></b>
Phase A:	
Cetyl Dimethicone Copolyol (Abil EM-90)	5.0
Octyl Stearate (Tegosoft OS)	12.0
Cyclomethicone (Abil B 8839)	8.0
Cetyl Dimethicone (Abil Wax 9801)	3.0
Hydrogenated Castor Oil	0.5
Microcrystalline Wax	1.0
Mineral Oil	2.0
Phase B:	
Titanium Dioxide	8.0
Phase C:	
Water	60.0
Sodium Chloride	0.5
Fragrance, Preservatives	Q.S.
<b><u>Procedure:</u></b>	
1. Combine the ingredients of Phase A. Heat to 80C to melt and disperse the waxes. Cool to 60C.	
2. Add the Titanium Dioxide. Disperse and mill the pigment. Cool to 50C.	
(3) Mix Phase C. Heat to 50C. Add to Phase A/B slowly with low energy stirrer. Maintain a milky appearance at all times.	
(4) Cool to 35C. Add Phase D. Homogenize.	

SOURCE: Goldschmidt Chemical Corp.: Formula LB-27-105

**Waterproof W/O Sunscreen Lotion (PABA)****SPF-12****Ingredients:**

% w/w

**Phase A:**

Cetyl Dimethicone Copolyol (and) Polyglyceryl-4 Isostearate (and) Hexyl Laurate (Abil WE-09)	5.0
Mineral Oil	5.0
Octyl Stearate (Tegosoft OS)	6.0
Cyclomethicone (Abil B 8839)	4.0
Cetyl Dimethicone (Abil Wax 9801)	1.0
Isopropyl Myristate (Tegosoft M)	4.0
Hydrogenated Castor Oil	0.8
Microcrystalline Wax	1.2
Octyl Dimethyl PABA	1.4

**Phase B:**

Water	70.8
Sodium Chloride	0.8

**Preservatives**

Q.S.

**Phase C:**

Fragrance	Q.S.
-----------	------

**Procedure:**

1. Add the components of Phase A. Heat while mixing to 80C to incorporate the waxes. Cool to 50C.
2. Heat Phase B to 50C. Add B to A slowly with a low energy mixer. Maintain a smooth milky appearance at all times.
3. Cool to 35C with sweep mixer. Add fragrance. (4) Homogenize. Formula LB-30-66

**Waterproof W/O Sunscreen Lotion (PABA/Melanin)****SPF-15****Ingredients:**

% w/w

**Phase A:**

Cetyl Dimethicone Copolyol (and) Polyglyceryl-4 Isostearate (and) Hexyl Laurate (Abil WE-09)	5.0
Mineral Oil	5.0
Octyl Stearate (Tegosoft OS)	6.0
Cyclomethicone (Abil B 8839)	4.0
Cetyl Dimethicone (Abil Wax 9801)	1.0
Isopropyl Myristate (Tegosoft M)	4.0
Hydrogenated Castor Oil	0.8
Microcrystalline Wax	1.2
Octyl Dimethyl PABA	1.4

**Phase B:**

Water	60.8
Melanin (10% active)	10.0

**Sodium Chloride**

0.8

**Preservatives**

Q.S.

**Phase C:**

Fragrance	Q.S.
-----------	------

**Procedure:**

1. Add the components of Phase A. Heat while mixing to 80C to incorporate the waxes. Cool to 50C. (2) Heat Phase B to 50C. Add B to A slowly with a low energy mixer. Maintain a smooth milky appearance at all times. (3) Cool to 35C with sweep mixer. Add fragrance. (4) Homogenize.

SOURCE: Goldschmidt Chemical Corp.: Formula LB-30-64

**Waterproof W/O Sunscreen Lotion (PABA)**  
**SPF-18**

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Cetyl Dimethicone Copolyol (and) Polyglyceryl-4	
Isostearate (and) Hexyl Laurate (Abil WE-09)	5.0
Mineral Oil	5.0
Octyl Stearate (Tegosoft OS)	6.0
Cyclomethicone (Abil B 8839)	4.0
Cetyl Dimethicone (Abil Wax 9801)	1.0
Isopropyl Myristate (Tegosoft M)	4.0
Hydrogenated Castor Oil	0.8
Microcrystalline Wax	1.2
Octyl Dimethyl PABA	3.0
Phase B:	
Water	69.2
Sodium Chloride	0.8
Preservatives	Q.S.
Phase C:	
Fragrance	Q.S.
<b>Procedure:</b>	
1. Add the components of Phase A. Heat while mixing to 80C to incorporate the waxes. Cool to 50C.	
2. Heat Phase B to 50C. Add B to A slowly with a low energy mixer. Maintain a smooth milky appearance at all times.	
3. Cool to 35C with sweep mixer. Add fragrance. (4) Homogenize. Formula LB-30-68	

**Waterproof W/O Sunscreen Lotion (PABA)**  
**SPF-17**

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Cetyl Dimethicone Copolyol (and) Polyglyceryl-4 Isostearate (and) Hexyl Laurate (Abil WE-09)	5.0
Mineral Oil	5.0
Octyl Stearate (Tegosoft OS)	6.0
Cyclomethicone (Abil B 8839)	4.0
Cetyl Dimethicone (Abil Wax 9801)	1.0
Isopropyl Myristate (Tegosoft M)	4.0
Hydrogenated Castor Oil	0.8
Microcrystalline Wax	1.2
Octyl Dimethyl PABA	1.4
Benzophenone-3	2.0
Phase B:	
Water	68.8
Sodium Chloride	0.8
Preservatives	Q.S.
Phase C:	
Fragrance	Q.S.
<b>Procedure:</b>	
1. Add the components of Phase A. Heat while mixing to 80C to incorporate the waxes. Cool to 50C. (2) Heat Phase B to 50C. Add B to A with a low energy mixer. Maintain a smooth milky appearance at all times. (3) Cool to 35C with a sweep mixer. Add fragrance. (4) Homogenize.	

SOURCE: Goldschmidt Chemical Corp.: Formula LB-30-70

**Waterproof W/O Sunscreen Lotion**  
**SPF-18**

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Cetyl Dimethicone Copolyol (and) Polyglyceryl-4	
Isostearate (and) Hexyl Laurate (Abil WE-09)	5.0
Mineral Oil	5.0
Octyl Stearate (Tegosoft OS)	6.0
Cyclomethicone (Abil B 8839)	4.0
Cetyl Dimethicone (Abil Wax 9801)	1.0
Isopropyl Myristate (Tegosoft M)	4.0
Hydrogenated Castor Oil	0.8
Microcrystalline Wax	1.2
Octyl Methoxycinnamate	3.0
Phase B:	
Water	69.2
Sodium Chloride	0.8
Preservatives	Q.S.
Phase C:	
Fragrance	Q.S.

**Procedure:**

1. Add the components of Phase A. Heat while mixing to 80C to incorporate the waxes. Cool to 50C. (2) Heat Phase B to 50C. Add B to A slowly with a low energy mixer. Maintain a smooth milky appearance at all times. (3) Cool to 35C with sweep mixer. Add fragrance. (4) Homogenize.  
Formula LB-27-107

**Waterproof W/O Sunscreen Lotion**  
**SPF 22**

<u>Ingredient:</u>	<u>% w/w</u>
Phase A:	
Cetyl Dimethicone Copolyol (and) Polyglyceryl-4 Isostearate (and) Hexyl Laurate (Abil WE-09)	5.0
Mineral Oil	5.0
Octyl Stearate (Tegosoft OS)	4.0
Cyclomethicone (Abil B 8839)	4.0
Cetyl Dimethicone (Abil Wax 9801)	1.0
Isopropyl Myristate (Tegosoft M)	4.0
Almond Oil	2.0
Hydrogenated Castor Oil	0.8
Microcrystalline Wax	1.2
Octyl Methoxycinnamate	3.0
Phase B:	
Water	69.2
Sodium Chloride	0.8
Preservatives	Q.S.
Phase C:	
Fragrance	Q.S.

**Procedure:**

1. Add the components of Phase A. Heat while mixing to 80C to incorporate the waxes. Cool to 50C. (2) Heat Phase B to 50C. Add B to A slowly with a low energy mixer. Maintain a smooth milky appearance at all times. (3) Cool to 35C with sweep mixer. Add fragrance. (4) Homogenize.

**SOURCE: Goldschmidt Chemical Corp.: Formula LB-27-53**

W/O Sunscreen Lotion  
with Melanin (0.05% active)

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Cetyl Dimethicone Copolyol (and) Polyglyceryl-4	
Isostearate (and) Hexyl Laurate (Abil WE-09)	5.0
Mineral Oil	5.0
Octyl Stearate (Tegosoft OS)	4.0
Cyclomethicone (Abil B 8839)	4.0
Cetyl Dimethicone (Abil Wax 9801)	1.0
Isopropyl Myristate (Tegosoft M)	4.0
Almond Oil	2.0
Hydrogenated Castor Oil	0.8
Microcrystalline Wax	1.2
Octyl Methoxycinnamate	3.0
Phase B:	
Water	68.7
Sodium Chloride	0.8
Melanin (10% active)	0.5
Preservatives	Q.S.
Phase C:	
Fragrance	Q.S.

Procedure:

1. Add the components of Phase A. Heat while mixing to 80C to incorporate the waxes. Cool to 50C. (2) Heat Phase B to 50C. Add B to A slowly with a low energy mixer. Maintain a smooth milky appearance at all times. (3) Cool to 35C with sweep mixer. Add fragrance. (4) Homogenize.

W/O Sun Protection Lotion  
(maximum protection)

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Cetyl Dimethicone Copolyol (Abil EM-90)	2.0
Caprylic/Capric Triglyceride (Tegosoft CT)	4.0
Octyl Palmitate (Tegosoft OP)	5.5
Hydrogenated Castor Oil	0.4
Synthetic Wax or Beeswax	0.6
Cyclomethicone (Abil B 8839)	7.0
Cetyl Dimethicone (Abil Wax 9801)	1.0
Octyl Methoxycinnamate	5.0
Benzophenone-3	1.5
Methyl Anthranilate	3.0
Phase B:	
Water	73.9
Sodium Chloride	0.6
Preservatives	Q.S.
Fragrance	Q.S.

Procedure:

1. Add the components of Phase A. Heat while mixing to 80C to incorporate the waxes. Cool to 50C. (2) Heat Phase B to 50C. Add B to A slowly with a low energy mixer. Maintain a smooth milky appearance at all times. (3) Cool to 35C with sweep mixer. Add fragrance. (4) Homogenize.

SOURCE: Goldschmidt Chemical Corp.: Formulations

W/O Sunscreen Lotion  
With Melanin (0.5% active)

<u>Ingredients:</u>	<u>% w/w</u>
Phase A:	
Cetyl Dimethicone Copolyol (and) Polyglyceryl-4 Isostearate (and) Hexyl Laurate (Abil WE-09)	5.0
Mineral Oil	5.0
Octyl Stearate (Tegosoft OS)	4.0
Cyclomethicone (Abil B 8839)	4.0
Cetyl Dimethicone (Abil Wax 9801)	1.0
Isopropyl Myristate (Tegosoft M)	4.0
Almond Oil	2.0
Hydrogenated Castor Oil	0.8
Microcrystalline Wax	1.2
Octyl Methoxycinnamate	3.0
Phase B:	
Water	64.2
Sodium Chloride	0.8
Melanin (10% active)	5.0
Preservatives	Q.S.
Phase C:	
Fragrance	Q.S.
1. Add the components of Phase A. Heat while mixing to 80C to incorporate the waxes. Cool to 50C.	
2. Heat Phase B to 50C. Add B to A slowly with a low energy mixer. Maintain a smooth milky appearance at all times.	
3. Cool to 35C with sweep mixer. Add fragrance.	
4. Homogenize.	
<b>SOURCE: Goldschmidt Chemical Corp.: Suggested Formulation</b>	
<b><u>Waterproof Sunscreen Lotion (SPF 15)</u></b>	

<u>Ingredients:</u>	<u>% by weight</u>
Part A:	
Deionized Water	72.75
Hydroxypropyl Methylcellulose (1% solution)	10.00
Quaternium-15	0.15
Disodium EDTA	0.05
Part B:	
Octyl Methoxy Cinnamate	7.00
Octyl Salicylate	3.00
Oxybenzone	2.00
C12-15 Alcohols Benzoate	4.00
Pemulen TR-1	0.25
Carbopol 2984	0.20
Methylparaben	0.15
Propylparaben	0.05
Part C:	
AMP-95	0.40

Combine A ingredients. Mix until homogeneous. Combine first four B ingredients in a separate vessel. Mix until oxybenzone has dissolved. Warming will hasten dissolution. Disperse last four B ingredients in B vessel. Mix to break up lumps. With moderate agitation, add B to A. Mix for 20-40 minutes or until a smooth, non-grainy dispersion is apparent. Add C and mix vigorously until until a smooth, lustrous product is obtained.

**SOURCE: Angus Chemical Co.: Formula PF-0228:Formula:B.F. Goodrich**

# **Section XIII**

## **Miscellaneous**



Antimicrobial Topical Gel

A sanitizing hand cleaner in a convenient gel form.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Distilled Water	46.00
2. Glycerin	1.50
3. Ucon 50HB-660	1.00
Part B:	
4. Isopropyl Alcohol	50.00
5. Acritamer 940	1.00
Part C:	
6. Isopropanolamine/Distilled Water (50/50)	+ -0.50

Compounding Procedures:

Part A: Combine materials with agitation until thoroughly mixed.  
 Part B: Sift Acritamer 940 into the isopropyl alcohol with rapid agitation and mix until a thin, cloudy dispersion without lumps is attained. Part C: Combine isopropanolamine and distilled water and mix until thoroughly blended.

Slowly add Part A to Part B with moderate agitation. Continue mixing for 30 minutes to insure a uniform solution. Slowly add Part C with agitation until the pH of the solution is 6.0-6.2 and a clear gel is formed.

Initial Viscosity: 40,000 cps.

48 hour pH: 6.0

48 hour Viscosity: 57,000 cps.

Note: Isopropanyl used at 50% is considered to be a sanitizer.

SOURCE: R.I.T.A. Corp.: Formulation 101-71

Syndet Bar

<u>Ingredient:</u>	<u>Wt. %</u>
Sodium Cocoyl Isethionate (and)	
Stearic Acid	Jordapon CI Flake
Soap Chip (80/20 Tallow/Coco)	83.5
Water	10.0
Fragrance, Pigments, etc.	5.0
	1.5

pH (10% Solution): 6.5-7.0

Procedure:

Blend all ingredients in amalgamator. Refine, extrude and stamp bars in normal fashion.

SOURCE: PPG Industries, Inc.: Formulation M-101

Eucalyptus + Mint Emulsion

A light lotion which provides temporary relief to areas sore from exercising.

<u>Ingredients:</u>	<u>Rich</u>
Part A:	
1. Distilled Water	46.25
Part B:	
2. Eucalyptamint	37.50
3. Pationic SSL	7.00
4. Supersat AWS 4	3.50
5. Ritasynt IP	1.75
6. Ritachol 1000	4.00

<u>Ingredients:</u>	<u>Super Rich</u>
Part A:	
1. Distilled Water	42.25
Part B:	
2. Eucalptamint	37.50
3. Pationic SSL	7.00
4. Supersat AWS 4	3.50
5. Ritasynt IP	1.75
6. Ritachol 1000	8.00

**Compounding Procedure:**

Weigh Part A in a container and heat to 71C. Weigh ingredients of Part B in another container and heat to 71C. Slowly add Part A to Part B. Mix for one hour. Cool stirred mixture to 35-45C. Pour into containers.

Eucalyptus + Mint Type Ointment

An unctuous lotion which has an analgesic effect when applied topically.

<u>Ingredients:</u>	<u>% W/W</u>
1. Menthol	16.00
2. Eucalyptus	4.00
3. Lanolin Anhydrous USP	80.00

**Compounding Procedure:**

Heat lanolin until melted, approximately 50C. Add remaining ingredients with mixing. Mix for one hour minimum. Fill hot.

Formulation 107-53

SOURCE: R.I.T.A. Corp.; Suggested Formulations

Fluoride Dentifrice

<u>Ingredients:</u>	<u>% by weight</u>
Calcium pyrophosphate	45.00
Sorbitol, 70% aq. soln.	20.00
Sodium lauryl sulfate	1.20
Sodium carboxymethylcellulose	0.60
Sodium saccharine	0.10
Stannous fluoride	0.40
Hexetidine	0.20
Flavoring	0.75
Water	31.75

SOURCE: Angus Chemical Co.: Formulation PF-0214E: UK Patent  
2,001,526A held by William R. Warner Co. Ltd. (1979)

Mouthwash

<u>Ingredients:</u>	<u>% by weight</u>
Ethanol	10.00
Glycerol	5.00
Ethoxylated high-purity castor oil (Cremophor EL)	0.25
Zinc Citrate	0.15
Hexetidine	0.20
Flavoring, saccharine	1.00
Water	to 100.00

SOURCE: Angus Chemical Co.: Formulation PF-0215E: European  
Patent 0,049,830 A2 held by Professor Hans Muehlmann  
(1982)

Gum-Massage Gel

<u>Ingredients:</u>	<u>% by weight</u>
Water	87.69
Allantoin	1.00
Panthenol	5.00
Cetylpyridinium chloride	0.01
Hexetidine	0.10
Methylcellulose	6.00
Peppermint oil	0.20

SOURCE: Angus Chemical Co.: Formulation PF-0216E: Swiss Patent  
622,945 held by Hans Lukaschek and Professor Manfred  
Maier (1981)

**High Quality Dog Shampoo**

<u>Ingredients:</u>	<u>% by Weight</u>
Steol CS-330	30.0
Stepanol AM-V	15.0
Glycerine	3.0
Ninol 55-LL	2.0
Ammonyx LO	1.0
Hydroxypropyl Methylcellulose	0.4
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Sodium chloride	Q.S.
D.I. water	Q.S. to 100

**Mixing Procedure:**

Heat one third required amount of D.I. water to 70C. Add hydroxypropyl methylcellulose and mix until all particles are wetted. Cool to room temperature while adding the remainder of the D.I. water. Mix until solution is clear and particle free. Add the first five components from above, mixing well after each addition. Adjust pH to 6.0-7.0 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with sodium chloride.

Clear, yellow liquid

pH (as is): 6.0-7.0

Passed three freeze/thaw cycles

Stable for two weeks at room temperature

Stable for four months at room temperature

Stable at 50C for two weeks

Stable for four months at room temperature

Viscosity Profile: as is: 680 cps

0.5% sodium chloride: 4,800 cps

1.0% sodium chloride: 10,450 cps

Evaluated in salon against leading brand. Formulation 484 was easier to comb (wet & dry) than leading brand.

Formulation No. 484

**Mild Dog Shampoo**

<u>Ingredient:</u>	<u>% by Weight</u>
Amphosol CA	25.00
Polysorbate 20	2.00
Propylene Glycol	2.00
Kessco PEG 6000 Distearate	0.50
Methyl Paraben	0.15
Citric Acid	Q.S.
Fragrance, Dye	Q.S.
D.I. Water	Q.S. to 100

**Mixing Procedure:**

Add first five components to D.I. water with mixing and heat to 60-65C until all components have melted. Cool with mixing to 40C. Adjust pH to 6.5-7.2 with citric acid. Add fragrance and dye, if desired.

Clear yellow liquid

pH (as is): 6.5-7.2

Viscosity @ 25C: 10 cps

Freeze/thaw stable

Stable at 50C for two weeks

Formulation No. 487

**SOURCE: Stepan Co.: Suggested Formulations**

Lipid- and Vitamin-Containing Liposome Gel

<u>Ingredients:</u>	<u>% by weight</u>
1. Phosphal 75 SA	4.0
2. Vegetable oils	2.0-10.0
3. Vitamin A palmitate	0.2
4. Vitamin E linoleate	0.2
5. Demineralized water	35.0
6. Demineralized water	to 100.0
7. Ethanol	16.0
8. Carbomer 980	0.8
9. AMP-95	0.5
10. Perfume oil	0.1

Procedure:

- A. Dissolve 1,2 and 3 homogeneously in 4.
- B. Add 5.
- C. Homogenize for 30 minutes at 3000 rpm (Stephen UMC 5 Mixer). Liposomes with a mean particle size of 250 nm should be produced.
- D. Testing for homogeneity:  
dilute 0.5 ml liposome dispersion with 99.5 ml demineralised water in a measuring cylinder. After turning over a few times, a transparent homogeneous dispersion should form, which exhibits Tyndall scattering. If this is not the case, the preparation should be repeated.
- E. Disperse 8 in 6 and 7, add 10 and stir.
- F. Add the product from E to the liposome dispersion and stir for 2 minutes.
- G. Add 9 and stir for 2 minutes at 2100 rpm.

Formulation PF-0196E

Rheumagel With (Without) Camphor

<u>Ingredients:</u>	<u>% by weight</u>
Carbomer 940	1.0
Tris Amino	1.0
2-hydroxyethylsalicylate	10.0
(Camphor)	(1.0)
EDTA	0.05
Propanediol	20.0
Isopropanol	20.0
Water	to 100.0

Procedure:

- A. Disperse the Carbomer in the water, then add EDTA to the dispersion.
- B. Mix hydroxyethyl salicylate (and camphor if required), propanediol and isopropanol.
- C. Mix A and B homogeneously and if necessary de-gas.
- D. Slowly stir in Tris Amino.
- E. Packaging should protect against light.

Formulation PF-0197E

SOURCE: Angus Chemical Co.: Suggested Formulations

Oil in Water Cream Base

A simple oil in water ointment base suitable for modification or incorporation of medicaments.

<u>Ingredients:</u>	<u>% W/W</u>
Part A:	
1. Ritachol 1000	12.00
2. Ritaderm	2.00
3. Shebu Refined	3.00
Part B:	
4. Glycerin	5.00
5. Distilled Water	78.00

Compounding Procedures:

Combine Phase A and heat to 70C. Combine Phase B and heat to 70C. Slowly add Phase A to Phase B with agitation. Cool to 35C with agitation. Package.

Formulation HB-89-R-32

Anhydrous Ointment Base

An anhydrous ointment base for use with added water and medicaments.

<u>Ingredients:</u>	<u>% W/W</u>
1. Ritachol	36.00
2. Mineral Oil, 70 viscosity	16.00
3. Microcrystalline Wax MP-170	24.00
4. Lanolin, Cosmetic Grade	24.00

Compounding Procedure:

Combine all ingredients. Heat with agitation to 175F and mix until uniform. Begin cooling, continue agitation. Slowly cool stirred mixture to just above the set point. Package.

Formulation HB-89-R-31

SOURCE: R.I.T.A. Corp.: Suggested Formulations

Oil/Water Emulsions With and Without PG-3 Beeswax

<u>Ingredients:</u>	<u>Emulsion A (without)</u>
Part A:	
Ceteareth-25	3.00
Ceteareth-6	2.00
Cetyl Alcohol	5.50
Propylene Glycol Dioctanoate	11.00
Dimethicone 200 cS	0.20
Part B:	
Preservative mixture	1.00
Water	67.00
Carbomer 940 (2% sol.)	5.00
Part C:	
Tris Amino	0.20
Water	4.80
Part D:	
Fragrance	0.30

<u>Ingredients:</u>	<u>Emulsion B (with)</u>
Part A:	
Ceteareth-25	3.00
Ceteareth-6	2.00
Cetyl Alcohol	5.50
PG-3 Beeswax	1.00
Propylene Glycol Dioctanoate	10.00
Dimethicone 200 cS	0.20
Part B:	
Preservative mixture	1.00
Water	67.00
Carbomer 940 (2% sol.)	5.00
Part C:	
Tris Amino	0.20
Water	4.80
Part D:	
Fragrance	0.30

SOURCE: Angus Chemical Co.: Formulation PF-0166 suggested by  
Koster Keunen Inc.

Premium Mild Dog Shampoo

<u>Ingredients:</u>	<u>% by Weight</u>
Steol CS-130	30.0
Amphosol CA	20.0
Polysorbate-20	5.0
Kessco PEG 6000 Distearate	2.0
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
D.I. water	Q.S. to 100

**Mixing Procedure:**

To D.I. water add Steol CS-130 and Kessco PEG 6000 Distearate. Heat to 60C with mixing, and mix until PEG 6000 Distearate is completely dispersed. Add Polysorbate-20 and Amphosol CA and blend well. Cool to 30C. Adjust pH to 6.5-7.3 with citric acid. Add fragrance, dye and preservative, if desired.

**Physical Properties:**

Light yellow liquid  
 pH (as is): 6.5-7.3  
 Passed three freeze thaw cycles  
 Stable for two weeks at 50C  
 Viscosity @ 25C: 100,000 cps  
 Formulation No. 485

Premium Dog Shampoo

<u>Ingredients:</u>	<u>% by Weight</u>
Steol CS-330	45.0
Ninol 55-LL	5.0
Amphosol CA	5.0
Citric acid	Q.S.
Fragrance, dye, preservative	Q.S.
Sodium chloride	Q.S.
D.I. water	Q.S. to 100

**Mixing Procedure:**

Add the first three components to D.I. water and mix until clear. Adjust pH to 5.5-6.5 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with sodium chloride.

**Physical Properties:**

Clear liquid  
 pH (as is): 5.5-6.5  
 Viscosity profile: as is: 750 cps  
                           0.5% sodium chloride: 5,050 cps  
                           1.0% sodium chloride: 11,450 cps  
                           2.0% sodium chloride: 27,350 cps  
 Passed three freeze/thaw cycles  
 Stable at 50C for two weeks  
 Formulation No. 486  
 SOURCE: Stepan Co.: Suggested Formulations



**Water-In-Oil Emulsion Base**

A non-beeswax water in oil emulsion which can be used at an acid pH. Has good rub-out for a w/o cream.

<u>Ingredients:</u>	<u>% W/W</u>
Part A - Oil Phase:	
1. Mineral Oil 80/90	21.00
2. Pationic CSL	7.20
3. Pationic ISL	0.80
4. Ritahydrox	1.00
5. Propylparaben	0.05
Part B - Water Phase:	
6. Glycerin	5.00
7. Distilled Water	64.65
8. Methylparaben	0.10
Part C:	
9. Glydant	0.20

**Compounding Procedure:**

Combine ingredients of Part A and heat to 72C. Combine the ingredients of Part B, heating to 72C. Add Part B to Part A while stirring and continue to mix. Cool to room temperature. Add Part C. Mix. Package.

Formulation HB-89-L-17/Ref. 104-6

**All Purpose Aloe Vera Gels**

A soothing gel to be applied for relief of irritation from sun, wind, detergents, minor burns and insect bites. Contains Panthenol and Aloe to soothe, relieve pain and promote healing.

<u>Ingredients:</u>	<u>% W/W</u>
1. Distilled Water	96.60
2. Ritaloe 200M	0.50
3. Ritapan DL	0.50
4. Germaben II	0.90
5. Acritamer 940	0.50
6. Triethanolamine (50%)	1.00

**Compounding Procedure:**

Dissolve in order items 2, 3, 4 and 5 into item 1, mixing between additions until uniform. Heat this mixture to 40C to get complete solution. Add item 6 to the stirred mixture.

Formulation HB-89-PA-24

**SOURCE: R.I.T.A. Corp.: Suggested Formulations**

## **Section XIV**

# **Trade-Named Raw Materials**

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
AA USP	Castor Oil	Rheox
A-C Copolymer 400	Ethylene/Vinyl Acetate Copolymer	Allied-Signal
A-C Polyethylene	Polyethylene	Allied-Signal
A-C Polyethylene 617A	Polyethylene	Allied-Signal
Abil AV-20	Phenyl trimethicone	Goldschmidt
Abil B8839	Cyclomethicone	Goldschmidt
Abil B8851	Dimethicone copolyol	Goldschmidt
Abil B8852	Dimethicone copolyol	Goldschmidt
Abil B9950	Dimethicone propyl PG-betaine	Goldschmidt
Abil B88183	Dimethicone copolyol	Goldschmidt
Abil EM-90	Cetyl dimethicone copolyol	Goldschmidt
Abil OSW-12 & OSW-13	Cyclomethicone (and) Dimethiconol (and) Dimethicone	Goldschmidt
Abil Quat 3270 & 3272	Quaternium-80	Goldschmidt
Abil S201	Dimethicone/Sodium Poly PG Propyl Dimethicone Thiosulfate	Goldschmidt
Abil Wax 2434	Stearoxy dimethicone	Goldschmidt
Abil Wax 2440	Behenoxy dimethicone	Goldschmidt
Abil Wax 9800	Stearyl dimethicone	Goldschmidt
Abil Wax 9801	Cetyl dimethicone	Goldschmidt
Abil Wax 9810	C24-28 alkyl methicone	Goldschmidt
Abil Wax 9814	Cetyl dimethicone	Goldschmidt
Abil WE-09	Polyglyceryl-4 Isostearate (and) cetyl dimethicone copolyol (and) hexyl laurate	Goldschmidt

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Abil 100&350&500&1000&5000	Dimethicone	Goldschmidt
Acetulan	Acetylated lanolin alcohol	Amerchol
Acritamer 934	Carbomer 934	RITA
Acritamer 940	Carbomer 940	RITA
Acritamer 941	Carbomer 941	RITA
Adol 52	Cetyl alcohol	Sherex
Adol 64	Stearyl alcohol	Sherex
Adol 66	Isostearyl alcohol	Sherex
Aerosil R821 & 200	Silica	Degussa
Ajidew N-50	Sodium PCA	Ajinomoto
Alconate SBR-3		Rhone-
Aldo MSB & MSC & MSD	Glyceryl Stearate S.E.	Lonza
Alfonic 1412-A	Ammonium laureth sulfate, 60%	Vista
Allantoin	Allantoin	Sutton
Alpha-Step MC-48	Alpha sulfo methyl ester	Stepan
Aluminum Zirconium Tetrachlorohydrate-Gly		Reheis
Amercell Polymer HM-1500	Nonoxynol hydroxyethyl-cellulose	Amerchol
Amerchol C	Petrolatum (and) lanolin (and) lanolin alcohol	Amerchol
Amerchol L-101	Mineral oil and lanolin alcohol	Amerchol
Amerlate LFA	Lanolin acid	Amerchol
Amerlate P	Isopropyl lanolate	Amerchol
Ameroxol OE-20	Oleth-20	Amerchol
Amerscreen P	Ethyl dihydroxypropyl PABA	Amerchol

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Amersil L-45/1000	Dimethicone	Amerchol
Amersil VS-7158	Cyclomethicone	Amerchol
Amidox C-5	Ethoxylated alkylolamide	Stepan
Ammonyx CDO&Cetac&KP LO&MO&SO&4	Amine oxide	Stepan
AMP-Regular&95	Aminomethyl propanol	Angus
Amphisol	DEA cetyl phosphate	Givaudan
Amphosol CA&CG	Cocamidopropyl betaine	Stepan
Antil 141 Liquid	Propylene glycol (and) PEG-55 propylene glycol oleate	Goldschmidt
Antil 171	PEG-18 glyceryl oleate/cocoate	Goldschmidt
Antil 208	Acrylates sterate-50 acrylate copolymer	Goldschmidt
Aqua Hamamelis	Witch hazel	
Arlacel 60	Sorbitan monostearate	ICI
Arlacel 80	Polysorbate 80	ICI
Arlacel 129	Glyceryl stearate	ICI
Arlacel 165	Glyceryl stearate (and) PEG-100 stearate	ICI
Arlacel 186	Glyceryl oleate (and) propylene glycol	ICI
Arlatone 983S	PEG-5 glyceryl stearate	ICI
Armeen DM 18D	Dimethyl stearamine	Akzo
Ascorbyl Palmitate	Ascorbyl palmitate	Roche
Avanel S-150	Sodium C12-15 Pareth-15 sulfonate	PPG
AZG-368 Solution	Aluminum-zirconium tetrachloro- hydrex GLY/50% solution in water	

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Beeswax	White, bleached beeswax	Ross
Bell Fragrance J-5226	Fragrance	
Bentone EW	Hectorite	Rheox
Bentone Gel SS-71	Petroleum distillate (and) quaternium-18 hectorite (and) propylene carbonate	Rheox
Bentone 38	Quaternium-18 hectorite	Rheox
Bernel Ester CO	Cetyl octanoate	Bernel
Biju Ultra UXD	Synthetic pearl pigment	Mearl
Biocare Polymer HA-24	Polyquaternium-24 (and) hyaluronic acid	
Biodynes TDF	Tissue respiratory factors	
Bioamin Se/P/C	Selenium polypeptides	Brooks
Bio-Soft D-62		Stepan
Bioterge AS-40	Sodium C14-16 olefin sulfonate	Stepan
Bio-Terge 804	Olefin sulfonate	Stepan
Biotin, FCC (Code 63344)	Biotin	Roche
Boron Nitride		Carborundum
Bovinal-30	Serum albumin	RITA
Brij 56	Ceteth-10	ICI
Brij 72	Steareth-2	ICI
Brij 76	Steareth-10	ICI
Brij 78	Steareth-20	ICI
Brij 98	Oleth-20	ICI
Brij 721	Steareth-21	ICI

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Bronopol	Bactericide	Inolex
Brookswax D	Cetearyl alcohol (and) ceteareth 20	Brooks
Brown Iron Oxide C33-115&C33-5136	Iron oxide	Sun
Brown Oxide 7061	Iron oxide	
BTC 2125M (50% active)	Myristalkonium chloride (and) quaternium-14	Stepan
Butylated Hydroxytoluene (BHT)		Sherwin
Butyl Stearate		Amerchol
C12-15 Alcohols Benzoate		Finetex
C19-011 Rubine Lake	D&C Red #7	Sun
C33-115 Cosmetic Brown, Iron oxides C33-134 Cosmetic Black, C33-5136 Cosmetic Brown, C33-5138 Cosmetic Russet, C33-8073 Cosmetic Yellow, C33-8074 Cosmetic Russet, C33-8075 Cosmetic Russet		Sun
C37-038 Permanent Pink D&C Red #30, Al lake		Sun
C38-5410 Cosmetic Blue F	Ferric ammonium ferro- cyanide	Sun
C43-001 Mango Violet	Manganese violet	Sun
C43-1810 Cosmetic Blue	Ultramarine blue	Sun
C47-056	Titanium dioxide	Sun
C61-1245 Cosmetic Green	Chromium oxide green	Sun
Ca Lake C19-022	D&C Red #6	Sun

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
CB-11, 7.9% Disp.	D&C red #7, Ca lake	Gloss Tex
CB-70, 7.9% Disp.	D&C red #6, Ba lake	Gloss Tex
CB-91, 7.9% Disp.	D&C red #34, Ca Lake	Gloss Tex
Cab-O-Sil M-5	Silica	Cabot
Calcium Stearate Regular		Witco
Candelilla Wax Refined Flakes		Strahl&Pits
Carbopol 934	Carbomer 934	Goodrich
Carbopol 940	Carbomer 940	Goodrich
Carbopol 941	Carbomer 941	Goodrich
Carbopol 980	Carbomer 980	Goodrich
Carbopol 981	Carbomer 981	Goodrich
Carbopol 1342	Carbomer 1342	Goodrich
Carbopol 1382	Carbomer 1382	Goodrich
Carbopol 2984	Carbomer 2984	Goodrich
Carbowax	PEG-8	Union Carb.
Carbowax 3350	PEG-75	Union Carb.
Carnation White	Mineral oil	Witco
Castorwax	Hydrogenated castor oil	CasChem
Castorwax MP-80&70	Hydrogenated castor oil	CasChem
Cellose Polymer PCG-10&QP-15,000H	Hydroxyethylcellulose	Union Carb.
Celquat SC-240	Polyquaternium-10	Nat. Starch
Cera Bellina	Polyglyceryl-3 beeswax	
Ceraphyl 41	C12-15 alcohols lactate	Van Dyk



RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Ceraphyl 60	Quaternium 22	Van Dyk
Ceraphyl 65	Quaternium 26	Van Dyk
Ceraphyl 140-A	Isodecyl oleate	Van Dyk
Ceraphyl 368	Octyl palmitate	Van Dyk
Ceraphyl 375	Isostearyl neopentanoate	Van Dyk
Cerasynt D	Stearamide MEA-stearate	Van Dyk
Cerasynt GMS	Glyceryl stearate	Van Dyk
Cerasynt IP	Glycol stearate (and) other ingredients	Van Dyk
Cerasynt Q	Glyceryl stearate SE	Van Dyk
Cerasynt 840	PEG-20 stearate	Van Dyk
Cerasynt 945	Glyceryl stearate (and) laureth-23	Van Dyk
Cetal	Cetyl alcohol	Amerchol
Ceteareth-6		Alcolac
Ceteareth-25		BASF
Cetiol A	Hexyl laurate	Henkel
Cetiol LC	Coco-caprylate/caprate	Henkel
Cetiol V	Decyl oleate	Bernei
Cetrol A	Hexyl laurate	Henkel
Cetyl Alcohol		Sherex
Chempro 100C	Hydroxylated animal protein	
Cholesterol NF	Cholesterol	RITA
Cirami NI	Shea butter (and) beeswax (and) candelilla wax	Tri-K

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Citric Acid, USP-FCC (Code 69941)	Citric acid	Roche
Clearlan	Lanolin	Henkel
Cloisonne' Cerise Flambe 550Z,	Cosmetic pearl powders in deep colors	Mearl
Cloisonne' Green 828C,		
Cloisonne' Imperial Gold 222X,		
Cloisonne' Monarch Gold 233X,		
Cloisonne' Nu-Antique Blue 6,		
Cloisonne' Nu-Antique Green 828CB,		
Cloisonne' Rouge Flambe 440X,		
Cloisonne' Super Blue 636Z,		
Cloisonne' Super Bronze 240Z,		
Cloisonne' Super Copper 350Z,		
Cloisonne' Super Gold 232Z,		
Cloisonne' Super Red 434Z,		
Cloisonne' Supergreen 827C,		
Cloisonne' Violet 525C		
CMC-7LF	Cellulose gum	Aqualon
CO-1695	Cetyl alcohol	Proctor&
CO-1895	Stearyl alcohol	Proctor&
Cocoamphodiacetate		Miranol
Collasol	Soluble collagen	Croda
Cosmetic White C47-056	Titanium dioxide	Sun
Cosmol 222	Diisostearyl malate	NisshinOil
Cremogen Aloe Vera	Propylene Glycol (and) Ethoxy- diglycol (and) Aloe Extract	Haarman
Cremophor RH 40	PEG-40 Hydrogenated Castor Oil	BASF
Cremophor RH 60	PEG-60 Hydrogenated castor oil	BASF
Crill 6	Sorbitan Isostearate	Croda
Crodacid B	Behenic acid	Croda

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Crodacol C-70	Cetyl alcohol	Croda
Crodacol S-95	Stearyl alcohol	Croda
Crodafos SG	PPG-5-Ceteth-10 phosphate	Croda
Crodamol MM	Myristyl myristate	Croda
Crodamol PMP	PPG-2 myristyl ether propionate	Croda
Crodamol W	Stearyl heptanoate	Croda
Crodapearl Liquid	Sodium laureth sulphate (and) hydroxyethyl stearamide-MIPA	Croda
Crodesta F-10	Sucrose distearate	Croda
Crodesta F-160	Sucrose stearate	Croda
Cromoist H4A	Hydrolyzed animal protein (and) hyaluronic acid	
Crosilk Liquid	Silk amino acids	Croda
Crosilkquat	Cocodimonium silk amino acids	Croda
Crosultaine C-50	Cocamidopropyl hydroxysultaine	Croda
Crotein SPA	Hydrolyzed animal protein	Croda
Crothix	Polyol alkoxy ester	Croda
Crovol A-70	PEG-60 almond glycerides	Croda
Crovol PK-70	PEG-45 palm kernel glycerides	Croda
Cutina CP	Cetyl palmitate	Henkel
Cutina GMS	Glyceryl stearate	Henkel
Cutina MD	Glyceryl stearate	Henkel
Cyprus Supra	Talc	Cyprus

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Delyl Extra	Isopropyl myristate	Givaudan
Delyl Prime	Isopropyl palmitate	Givaudan
Deodorized AAA Lanolin		Amerchol
Dermacryl-79	Acrylates/octylpropenamide copolymer	
Dermasome E	Lecithin (and) tocopheryl acetate	ChemMark
Dermasome RP	Vitamin A liposome	ChemMark
Dermasome SOD	Lecithin (and) superoxide dimutase	ChemMark
Dermasome TRF	Biodynes TRF liposome	ChemMark
Dexpanthenol (Code #63909)	Panthenol	Roche
Diazolidinyl Urea		Sutton
Dimethicone 200 cS		Dow Corning
Dimethicone Copolyol		Dow Corning
Diocetyl Maleate		Bernel
Dispersen G		
Distearyldimonium Chloride		Sherex
DL-Panthenol	Panthenol	Tri-K
dl-Panthenol, Cosmetic Grade (Code 63920)		Roche
DL Panthenol TK	Triethanolamine panthenol	Tri-K
DMDM Hydantoin		Lonza
Dow Corning 190	Dimethicone copolyol	Dow Corning
Dow Corning 200	Dimethicone	Dow Corning
Dow Corning 344 Fluid Cyclomethicone		Dow Corning

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Dowicil 200	Quaternium-15	Dow Chem
Drakeol 7&9&21&35	Mineral oil	Penreco
Drewpol 3-1-0	Polyglyceryl ester-emulsifier	Stepan
Dry Flo	Aluminum starch octenyl succinate	
Duochrome RY (Red/Gold) 224C	Iridescent color	Mearl
Duochrome YR (Gold/Red) 422C	Iridescent color	Mearl
EFA-Plex WGOFA	Wheat germ oil fatty acids (and) wheat germ oil (and) tocopherol	
EGMS-VA	Glycol stearate	Goldschmidt
Elastein	Hydrolyzed elastin	Hormel
Elastin CLR	Hydrolyzed animal elastin	Hormel
Emerest 2400	Glyceryl stearate	Henkel
Emerest 2715	PEG-40 stearate	Henkel
Emersol 120&132	Stearic acid	Henkel
Emersol 871	Isostearic acid	Henkel
Emsorb 2518	Sorbitan diisostearate	Henkel
Emulgator E-2568	Steareth-25	Goldschmidt
Emulgator 2155	Steareth-7 (and) stearyl alcohol (and) steareth-10	Goldschmidt

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Emulsynt 1055	Polyglyceryl-4 oleate (and) PEG-8 propylene glycol cocoate	Van Dyk
Epikuron SH 200		
Ervol	Mineral oil	Witco
Ervol-125/135 SUS	Mineral oil	Witco
Escalol 507	Octyl dimethyl PABA	Van Dyk
Escalol 537Q	Dimethyl PABA ethyl cetearyl- dimonium tosylate	Van Dyk
Escalol 557	Octyl methoxycinnamate	Van Dyk
Escalol 567	Benzophenone-3	Van Dyk
Estol EHP 1543	Octyl palmitate	Unichema
Estol 1473	Glyceryl stearate	Unichema
Ethylflo 366 NF	Polydecene	Ethyl
Eumulgin B1	Ceteareth-12	
Eumulgin B2	Ceteareth-20	
Eusolex 232		EM Industries
Eutanol G	Octyldodecanol	Henkel
Evening Primrose Oil & Tocopherol		Brooks

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Finsolv TN	C12-15 alcohols benzoate	Finetex
Fitoderm	Squalane	Centerchem
Flamenco Pearl 110C, Flamenco Superpearl 120C, Flamenco Super Red 430Z, Flamenco Twilight Blue 620CB, Flamenco Twilight Gold 230ZB, Flamenco Twilight Green 820CB, Flamenco Ultra Silk, Flamenco Violet 120V, Flamenco Violet 520C	Pearl pigments	Mearl
Fluid AP		Union Carbide
Fluilan	Lanolin oil	Croda
Fomblin HC04 Emulsion	Perfluoropolymethyl/isopropyl ether&Glycerin&sodium laureth sulfate	Brooks
Fomblin HC/25	Perfluoropolymethyl/isopropyl ether	Brooks
Forlan	Petrolatum (and) lanolin alcohol (and) lanolin	RITA
Forlan C-24	Choleth-24 (and) ceteth 24	RITA
Forlan L	Petrolatum (and) lanolin (and) hydrogenated castor oil (and) sorbitan sesquioleate and stearyl alcohol (and) cetyl alcohol	RITA
Forlan 500	Petrolatum (and) lanolin (and) lanolin alcohol	RITA
Fragrance FR-30&KU70	Fragrance	Novarome
Frescolat	Menthyl lactate	HaarmanF

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Ganex V220	PVP/Eicosene copolymer	GAF
Gemtone Amber G001, Gemtone Garnet G009, Gemtone Goldstone G0014, Gemtone Moonstone G004, Gemtone Ruby G0010, Gemtone Sapphire G0011, Gemtone Sunstone G0012, Gemtone Tan Opal G005	Cosmetic pearl powders	Mearl
Germaben II & IIE	Propylene glycol (and) diazolidinyl urea (and) methyl paraben (and) propyl paraben	Sutton
Germall 115	Imidazolidinyl urea	Sutton
Glucam E-10	Methyl gluceth-10	Amerchol
Glucam E-20	Methyl gluceth-20	Amerchol
Glucam E-20 Distearate	Methyl gluceth-20 distearate	Amerchol
Glucam P-20	PPG-20 methyl glucose ether	Amerchol
Glucam P-20 Distearate	PPG-20 methyl glucose ether distearate	Amerchol
Glucamate DOE-120	PEG-120 methyl glucose dioleate	Amerchol
Glucamate SSE-20	PEG-20 methyl glucose sesquistearate	Amerchol
Glucate DO	Methyl glucose dioleate	Amerchol
Glucate IS	Methyl glucose sesquiisostearate	Amerchol
Glucate SS	Methyl glucose sesquistearate	Amerchol
Glucquat 125	Lauryl methyl gluceth-10 hydroxylpropyldimonium chloride	Amerchol
Glycosomes	Glycoceramides (and) phospholipids (and) cholesterol	Pentapharm



RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Grillolocin CW-90	Zinc ricinoleate (and) solubilizers	RITA
Grillolocin HY-77	Zinc ricinoleate and etc.	RITA
Grillolocin P-176	Zinc ricinoleate (and) talc	RITA
Grillolocin PY-88	Zinc ricinoleate	RITA
Grilloten LSE 65K & LSE 87K	Sucrose cocoate	RITA
Grilloten PSE 141G	Sucrose stearate	RITA
Hampene Na3T	Trisodium EDTA	Grace
Heliopan AV	UV-B	
Henkel Glycerin, 96%	Glycerol	Henkel
Hetester PCA	Propylene glycol ceteth-3 acetate	Heterene
Hexetidine		Angus
Homogeneous 30	Cocamidoproyl betaine	Croda
Hostapon KA	Sodium isethionate	Hoechst
Hydrocoll EN-55	Hydrolyzed animal protein	Brooks
Hydroxypropyl Methylcellulose		Aqualon
Hystrene 7018 & 9718	Stearic acid	Witco

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Igepon AC78	Sodium isethionate	Rhone-Poul
Imidazolidinyl Urea	Preservative	Sutton
Incrodet TD-7C	Trideceth-7 carboxylic acid	
Incromectant AQ	Acetamidopropyl trimonium chloride	Croda
Incromectant LAMEA	Acetamide MEA (and) Lactamide MEA	Croda
Incromide LR	Lauramide DEA	Croda
Incromine BB	Behenamidopropyl dimethylamine	Croda
Incromine Oxide C	Cocamidopropylamine oxide	Croda
Incropol CS-20	Ceteareth 20	Croda
Incroquat BA-85	Babassamidopropalkonium chloride	Croda
Incroquat Mink-85	Minkamidopropalkonium chloride	Croda
Indopol H-100	Polybutene	Amoco
Incrosul OMS	Disodium oleamido MEA-sulfo-succinate	Croda
Isohexadecane		Bayer AG
Isolan GI-34	Polyglyceryl-4 isostearate	Goldschmidt
Isolan GO-33	Polyglyceryl-3 oleate	Goldschmidt
Isopar H	C11-12 Isoparaffin	Amoco
Isopropylan 33	Isopropyl palmitate (and) lanolin oil	Amerchol
Isostearyl Benzoate		Finetex
Ivarlan 3100	Lanolin oil	Brooks

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Jordapon ACI-30	Ammonium cocoyl isethionate	PPG
Jordapon CI Disp.	Sodium cocoyl isethionate	PPG
Kathon	Fungicide	Rohm&Haas
Keltrol & Keltrol T	Xanthan gum	Kelco
Kelzan	Xanthan gum	Kelco
Kessco Cetyl Alcohol		Stepan
Kessco Ethylene Glycol Distearate (EGDS)		Stepan
Kessco Ethylene Glycol Monostearate (EGMS)		Stepan
Kessco Glycerol Monooleate		Stepan
Kessco Glycerol Monostearate SEAS		Stepan
Kessco Isopropyl Myristate		Stepan
Kessco Isopropyl Palmitate		Stepan
Kessco Octyl Isonanoate		Stepan
Kessco Octyl Palmitate		Stepan
Kessco PEG-400 Monolaurate (PEG-8 Dioleate)		Stepan
Kessco PEG 400 Monooleate (PEG-8 Distearate)		Stepan
Kessco PEG 1000 Monostearate (PEG-20 Stearate)		Stepan
Kessco PEG 6000 Distearate (PEG-150 Distearate)		Stepan
Klearol	Mineral oil	Witco
Klucel HF	Hydroxypropyl cellulose	Aqualon
Kytamer PC	Chitosan PCA	Henkel

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Lactil	Sodium lactate and etc.	Goldschmidt
Lanaetex 75	Acetylated lanolin alcohols	Lanaetex
Laneto-AWS	PEG-12-PEG-50 Lanolin	RITA
Laneto-50	PEG-75 lanolin	RITA
Laneto-60	PEG-60 lanolin	RITA
Laneto-100	PEG-75 lanolin	RITA
Lanette O	Cetearyl alcohol	Henkel
Lanette 18 DEO		Henkel
Lanogene	Lanolin oil	Amerchol
Lanolin, Cosmetic		PPG & RITA
Lanolin Wax		RITA
Lantrol	Lanolin oil	Henkel
Lexaine C&CG-30&CS	Cocamidopropyl betaine	Inolex
Lexaine CSB-50	Cocamidopropyl hydroxysultaine	Inolex
Lexaine IS	Isostearamidopropyl betaine	Inolex
Lexaine LM	Lauramidopropyl betaine	Inolex
Lexaine O	Oleamidopropyl betaine	Inolex
Lexamine L-13	Lauramidopropyl dimethylamine	Inolex
Lexamine LM	Lauramidopropyl betaine	Inolex
Lexamine O-13	Oleamidopropyl dimethylamine	Inolex
Lexamine S-13	Stearamidopropyl dimethylamine	Inolex
Lexate BPQ	Lauramidopropyl Betaine & etc	Inolex
Lexate CRC		Inolex

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Lexein QX3000	Quaternium-76 hydrolyzed animal protein	Inolex
Lexein X250	Hydrolyzed animal protein	Inolex
Lexemu1 EGDS	Glycol distearate	Inolex
Lexemu1 EGMS	Glycol stearate	Inolex
Lexemu1 55G	Glyceryl stearate	Inolex
Lexgard M	Methylparaben	Inolex
Lexgard P	Propylparaben	Inolex
Lexol IPM	Isopropyl myristate	Inolex
Lexol IPP	Isopropyl palmitate	Inolex
Lexol PG-865	Lauramidopropyl dihydroxypropyl dimonium chloride	Inolex
Lexol PG-900	Propylene glycol dipelargonate	Inolex
Lexquat AMG-BEO	Behenamidopropyl dihydroxypropyl dimonium chloride	Inolex
Lexquat AMG-IS	Isostearylamidopropyl dihydroxypropyl dimonium chloride	Inolex
Lexquat AMG-M	Lauramidopropyl dihydroxypropyl dimonium chloride	Inolex
Lexquat AMG-O	Oleamidopropyl dihydroxypropyl dimonium chloride	Inolex
Lexquat AMG-WC	Cocamidopropyl dihydroxypropyl dimonium chloride	Inolex
Lipovol O-20	Oleth-20	Lipo
Lipolan	Hydrogenated lanolin	Lipo
Liponic EG-1	Glycereth-26	Lipo
Lipopeg 200 DL	PEG-4 dilaurate	Lipo

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Liposorb SQ0	Sorbitan sesquioleate	Lipo
Lipovol ALM	Acetylated lanolin alcohol	Amerchol
Liquiwax DICDD	Diisocetyl dodecandioate	Brooks
Lo-Micron Talc #1	Talc	Whittaker,
Lubragel MS	Polyglycerylmethacrylate (and) propylene glycol	
Lustabrite S-70	Tosylamide/epoxy resin	Telechinische
Macol CPS	Cetearyl alcohol and etc.	PPG
Macol CSA-20	Ceteareth-20	PPG
Macol E1450	PEG-32	PPG
Macol E8000	PEG-150	PPG
Macol NP-95	Nonoxynol-9	PPG
Macol OA-2	Oleth-2	PPG
Macol P-500	PPG-9	PPG
Macol 18	Meroxapol 171	PPG
Macol 57	PPG-10 butanediol	PPG
Macol 108	Poloxamer 338	PPG
Macol 124	Cetearyl alcohol (and) ceteareth-20	PPG
Macol 125	Stearyl alcohol (and) ceteareth-20	PPG
Macol 159	PEG 7 Glyceryl cocoate	PPG
Mafo CAB	Cocamidopropyl betaine	PPG

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Mafo CSB-50	Cocamidopropyl hydroxysultaine	PPG
Mapeg EGDS	Ethyl glycol distearate	PPG
Mapeg EGMS	Ethylene glycol monostearate	PPG
Mapeg 400DL	PEG 400 dilaurate	PPG
Mapeg 6000DS	PEG 150 distearate	PPG
Maprofix ES-1	Sodium laureth sulfate	PPG
Masil SF-V	Cyclomethicone	PPG
Masil SF-20	Dimethicone	PPG
Masil SF-V	Cyclomethicone	PPG
Masil SF 100	Dimethicone	PPG
Masil SF 556	Phenyl trimethicone	PPG
Masil SF-1000	Dimethicone	PPG
Masil 280 & 280LP	Dimethicone copolyol	PPG
Masil 756	Tetrabutoxypropyl methicone	PPG
Masil 1066C	Dimethicone copolyol	PPG
Masilwax 135	Methyl stearoxy dimethicone	PPG
Mattina Red 424F		Mearl
Maypon 4C	Potassium coco-hydrolyzed animal protein	Inolex
Maypon 4CT	TEA-coco-hydrolyzed animal protein	Inolex
Mazamide CMEA	Cocamide MEA	PPG
Mazamide JT-128 & 80	Cocamide DEA	PPG
Mazol 159	PEG-7 glycerol cocoate	PPG

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Mazol 165C	Glyceryl stearate (and) PEG-100 stearate	PPG
Mazol 1400	Capric/caprylic triglyceride	PPG
Mazon AL-300	Ammonium lauryl sulfate	PPG
Mazon EE-1	Benzyl laurate	PPG
Mazon ES-60	Sodium lauryl ether sulfate	PPG
Mazon SL-300	Sodium lauryl sulfate	PPG
Mazox CAPA	Cocamidopropyl amine oxide	PPG
Mazox LDA	Lauramine oxide	PPG
Mazox SDA	Stearamine oxide	PPG
Mearlite GBU, Mearlite LBU	Synthetic pearl pigments	Mearl
Mearlmaid AA & PLN	Natural pearl essence	Mearl
Mearlmica CF & SVA	Cosmetic mica powder	Mearl
Mearltalc TCA		Mearl
Merquat 550	Polyquaternium-7	Merck
Methocel E4M & F4M & 40-100 & 60HC (4000)	Hydroxypropylmethylcellulose	Dow Chem.
Methyl Parasept	Methyl paraben	Kalama
MGK Intermediate 5734	N,N-diethyltoluamide (95% meta)	MGK
MGK 264	N-octyl bicycloheptene dicarboxymide	MGK
MGK Repellent 326	Di-n-propyl isocinchomerate	MGK
Microspheres M-100	Polymethyl Methacrylate	Toyomenca
Mineral Oil (Light) 125/135 SUS		Witco



RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Miranol BT	Lauroamphocarboxyglycinate (and) sodium trideceth sulfate	Miranol
Miranol CM Conc., N.P.	Cocoamphoglycinate	Miranol
Miranol C2M-NP	Cocoamphocarboxyglycinate	Miranol
Modulan	Acetylated lanolin	Amerchol
Monamate CPA-40	Disodium cocamido Nipa-sulfosuccinate	Mona
Monamate LNT-40	Diammonium lauryl sulfo-succinate	Mona
Monamid CMA	Cocamide MEA	Mona
Monamid 716 & 1034	Lauramide DEA	Mona
Monaquat P-TS	Stearamidopropyl PG-Dimonium chloride phosphate	Mona
Monaquat TG	Dihydroxyethyl dihydroxyprop-yl stearammonium chloride	Mona
Monaterge 1164	Sodium lauryl sulfate (and) Disodium lauryl sulfosuccinate	Mona
Monateric CAB	Cocamidopropyl betaine	Mona
Monateric CAB-LC	Cocamidopropyl betaine	Mona
Monateric ISA-35	Amphoteric-12	Mona
Monateric LMAB	Lauramidopropyl betaine	Mona
Monateric 805	Cocamphodiacetate (and) Disodium cocamido MIPA sulfosuccinate	Mona
M-Quat Dimer 18	Hydroxypropyl bis stearyl-dimonium chloride	PPG
M-Quat Dimer 18PG	Hydroxypropyl bis-stearyl dimonium chloride	PPG
M-Quat JO-50	Olealkonium chloride	PPG
M-Quat JS-25	Stearalkonium chloride	PPG

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
M-Quat 522	Isostearamidopropyl ethyl-dimonium ethosulfate	PPG
M-Quat 1033	Soya ethyldimonium ethosulfate	PPG
Multiwax 180W	Microcrystalline wax	Witco
Myracet 9-40	Glyceryl mono/distearate	Eastman
Myristyl Myristate		Van Dyk
Myrj 52	PEG-50 Stearate	ICI
Myrj 52S	PEG-40 Stearate	ICI
Myverol 18-00	Hydrogenated animal glyceride	Eastman
Myverol 18-06	Hydrogenated soy glyceride	Eastman
Natrosol 250 HHR & 250 HR & 250R	Hydroxyethylcellulose	Aqualon
Natural Beeswax	Beeswax	RITA
Neobee M5	Caprylic/capric triglyceride	Stepan
Neo Heliopan AV	Octyl methoxycinnamate	Haarman
Neo Heliopan Hydro	Phenylbenzimidazole sulfonic acid	Haarman
Neo Heliopan MA	Menthyl anthanilate	Haarman
Ninol 30LL	Lauramide DEA	Stepan
Ninol 40 CO	Cocamide DEA	Stepan
Ninol 49-CE&50-LL&55-LL&96-SL&201 LMP	Alkylolamide	Stepan
Noville #24093	Fragrance	Henkel
Novol	Oleyl alcohol	Lonza

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Octyldodecyl Stearoyl stearate		VanDyk
Octyl Hydroxystearate		CasChem
Octyl Palmitate (and) Titanium Dioxide		Tioxide
Ohlan	Hydrogenated lanolin	Amerchol
Oleth-10		Protameen
Olympic Talc	Talc	Cyprus
Orgasol 2002D Natural Extra Cos	Nylon-12	Atochem
Oxaban A	Preservative	Angus
Oxybenzone	Benzophenone-3	
Ozokerite 170-D		Strahl&Pit-
Ozokerite Wax 77W	Ozokerite wax	Ross
Pale Gold Glitter	(.004X.004X.001)	Meadowbrook
Panalane	Hydrogenated Polybutene	Amoco
Paraffin Wax Fully Refined 130		Ross
Parso1 MCX	Octyl methoxycinnamate	Givaudan
Parso1 1789	Butyl methoxydibenzoylmethane	Givaudan
Pationic CSL	Calcium stearoyl lactylate	RITA
Pationic ISL	Sodium isostearoyl lactylate	Patco
Pationic SBL	Sodium behenyl lactylate	Patco
Pationic SCL	Sodium cocoyl lactylate	Patco

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Pationic SSL	Sodium stearoyl lactylate	Patco
Pationic 122A	Sodium caproyl lactylate	Patco
Pationic 138C	Sodium lauroyl lactylate	Patco
Patlac IL	Isostearyl lactate	Patco
Patlac LA	Lactic acid	Patco
Patlac NAL	Sodium lactate	Patco
PEG-1 Glyceryl Oleostearate + Paraffin Wax		ICI
PEG-35 Hydrogenated Castor Oil		ICI
Pemulen TR-1 & TR-2	Acrylates C10-30 alkyl acrylate cross polymer	Goodrich
Penreco No. 15	Mineral jelly	Penreco
Penreco Snow & Ultima White petrolatum USP		Penreco
Peptein 2000	Hydrolyzed animal protein	Hormel
Perfume 673-146		Perry
Perfume M-45790		ShawMudge
Perfume Oil		Novarome
Perfume Oil	Fragrance	Givaudan
Perfume #2478		Norda
Perfume 72979		Haarman
Perfume 802169U		PFW
Permethyl 102A (and) Permethyl 104A	Isoeicosane (and) Isooctahexacontane	
PG-3 Beeswax		KosterKuen-
Phenonip	Phenoxyethanol and etc.	Nipa
Phenyl Dimethicone		Wacker

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Phosphal 75 SA		
Phospholipid EFA	Linolamidopropyl PG-Dimonium chloride phosphate	Mona
Phospholipid P-TS	Stearamidopropyl PG-Dimonium chloride phosphate	Mona
Phosphoteric QL-38	Trisodium lauroampho PG acetate chloride	Mona
Placenta Liquid		CLRRicht
Polowax		Croda
Polyglyceryl-10 Decaoleate		Karls-
Polymer ACP-1018	Vinyl caprolactam/PVP/Dimethyl- amonoethylmethacrylate copolymer	
Polymer JR30M		UnionCar
Polyox WSR-205	PEG-14M	UnionCar
Polysorbate 60	Polyoxyethylene (20) sorbitan monostearate	ICI
Pot Marigold LS	Calendula extract	Tri-K
PPG Methyl Gluceth-20		Amerchol
Promulgen D	Cetearyl alcohol and cetareth-20	Amerchol
Promulgen G	Stearyl alcohol and cetareth-20	Amerchol
Propal	Isopropyl palmitate	Amerchol
Propoxyol-5	PPG-5 lanolin wax	Henkel
Propyl Parasept	Propylparaben	Tenneco
Propylene Glycol Dioctanoate		Henkel
Prosolal S9		Dragoco

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Protectein	Propyltrimonium hydrolyzed collagen	
Pseudocollagen	Plant pseudocollagen	Brooks
Pur-Cellin Liquid		Dragoco
Pur-Cellin Solid		Dragoco
PVP/VA E735	PVP/VA copolymer	GAF
PVP-K30	PVP	GAF
PVP K-90	Polyvinylpyrrolidone	GAF
Pyridoxine Hydrochloride, USP-FCC (Code 60650)		Roche
Quamectant AM-50	6-(N-Acetylamino)-4-Oxahexyl trimonium chloride	Brooks
Quaternium-15		Dow
Quat-Pro S	Steartrimonium hydrolyzed animal protein	Amerchol
Red Iron Oxide A6205		HK Color
Red Oxide 7060	Iron oxide	
Red Oxide 7067	Iron oxide	
Refined Candelilla Wax		Ross
Refined Paraffin 130/135		Ross
Rezal 36GP	Al Zr tetrachlorohydrate Gly	Reheis
Ritabate 20	Polysorbate-20	RITA
Ritabate 40	Polysorbate-40	RITA

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Ritabate 60	Polysorbate-60	RITA
Ritabate 80	Polysorbate-80	RITA
Ritacet-20	Ceteareth-20	RITA
Ritaceti	Cetyl esters	RITA
Ritacetyl	Acetylated lanolin	RITA
Ritachlor 50%	Aluminum chlorohydrate	RITA
Ritachol	Mineral oil (and) lanolin alcohol	RITA
Ritachol SS	Stearyl stearate	RITA
Ritachol 1000	Cetearyl alcohol (and) polysorbate 60 (and) PEG-150 stearate (and) steareth-20	RITA
Ritachol 2000	Cetearyl alcohol (and) polysorbate 60	RITA
Ritachol 5000	Cetearyl alcohol and etc.	RITA
Ritacollagen BA-1&S-1	Soluble collagen	RITA
Ritaderm	Petolatum (and) lanolin (and) sodium PCA (and) Polysorbate 85	RITA
Rita EGDS	Glycol distearate	RITA
Rita EGMS	Glycol stearate	RITA
Rita GMS	Glyceryl stearate	RITA
Ritahydrox	Hydroxylated lanolin	RITA
Ritalafa	Lanolin acid	RITA
Ritalan	Lanolin oil	RITA
Ritalan AWS	PPG-12-PEG-65 lanolin oil	RITA
Ritalan C	Isopropyl palmitate (and) lanolin oil	RITA

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Ritalastin EL-10	Hydrolyzed elastin	RITA
Ritalastin EL-30	Hydrolyzed elastin	RITA
Ritaloe 1X & 200M	Aloe vera gel	RITA
Ritamectant K2	Dipotassium glycyrrhizinate	RITA
Ritapan D & DL	Panthenol	RITA
Ritapan TA	Panthenyl triacetate	RITA
Ritamectant PCA	Sodium PCA	RITA
Ritamide C	Cocamide DEA	RITA
Ritapreg 150 DS	PEG-150 Distearate	RITA
Ritaplast	Mineral oil (and) polyethylene	RITA
Ritapro 100	Cetearyl alcohol (and) Steareth-20 (and) Steareth-10	RITA
Ritapro-165	Glyceryl stearate (and) PEG-100 Stearate	RITA
Ritapro 200	Stearyl alcohol (and) Ceteareth-20	RITA
Ritapro 300	Cetearyl alcohol (and) Ceteareth-20	RITA
Ritasol	Isopropyl lanolate	RITA
Ritasynt IP	Glycol stearate (and) other ingredients	RITA
Ritawax	Lanolin oil	RITA
Ritawax AEO	Polysorbate 80 (and) Acetylated lanolin alcohol (and) cetyl acetate	RITA
Ritawax ALA	Cetyl acetate (and) acetylated lanolin alcohol	RITA



RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Ritawax Super	Lanolin oil	RITA
Ritaleth-2	Oleth-2	RITA
Ritaleth-5	Oleth-5	RITA
Ritaleth-10	Oleth-10	RITA
Ritaleth-20	Oleth-20	RITA
Ritox 52	PEG-40 stearate	RITA
Robane	Squalane	Robeco
Sandoxylate SX-424	PPG-1-Isodeceth-12	Sandoz
Schercemol CO	Cetyl octanoate	Scher
Schercemol DIA	Diisopropyl adipate	Scher
Schercemol DID	Diisopropyl dimerate	Scher
Schercemol GMS	Glyceryl stearate	Scher
Schercemol LL	Lauryl lactate	Scher
Schercemol TIST	Triisostearyl trilinoleate	Scher
Schercemol 185	Isostearyl neopentanoate	Scher
Sequestrene Na2	Disodium EDTA	Ciba-Geigy
Sequestrene Na3	Trisodium EDTA	Ciba-Geigy
Sesame Oil, USP	Sesame oil	Welch, Holm
Sesame Seed Oil Super Refined		Nisshin
SF-96-5		GE
SF-96-50		GE

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
SF-96-100	Dimethicone	GE
SF 1173	Cyclomethicone	GE
SF 1188	Dimethicone copolyol	GE
SF 1202	Cyclomethicone	GE
SF 1204	Cyclomethicone	GE
SF 1214	Cyclomethicone (and) dimethicone copolyol	GE
SF 1228	Cyclomethicone (and) dimethicone copolyol	GE
SF 1312	Lauroyl trimethylpropane siloxo silicate	GE
SF 1318	Isostearyl trimethylolpropane siloxo silicate	GE
SF 1708-D1	Trimethylsilylamodimethicone	GE
Shebu, Refined	Shea butter	RITA
Shebu, WS	PEG-50 Shea butter	RITA
Shell-Sol-71	Petroleum distillate	Shell
Shniju White 100T		Mearl
Silicone 200 Fluid	Dimethicone	DowCorning
Silicone Fluid 344	Cyclomethicone	DowCorning
Silicone Fluid 345	Cyclomethicone	DowCorning
Silicone Oil		Wacker
Silicone SF 96	Dimethicone	GE
Silk-Pro CM-1000	Hyrolyzed silk protein	Ikeda
Simchin, Natural	Jojoba oil	RITA
Simchin, WS	PEG-40 Jojoba oil	RITA

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Sipon ES-2 & ESY	Sodium laureth sulfate	RhonePoul-
Sipon L-22	Ammonium lauryl sulfate	RhonePoul-
Sipon LSB	Sodium lauryl sulfate	RhonePoul-
Sipon LT-6	TEA lauryl sulfate	RhonePoul-
Siponate DDB-40	Alkyl aryl sulfonate	RhonePoul-
S-Maz 20	Sorbitan stearate	PPG
S-Maz 60	Sorbitan monostearate	PPG
S-Maz 80	Sorbitan laurate	PPG
SM2115	Trimethylsilylamodimethicone	GE
SM2115-D1	Trimethylsilylamodimethicone	GE
Snow White USP	Petrolatum	Penreco
Sodium Isethionate 55		RhonePoul
Sodium Stearate C-1		Witco
Softisan 378	Caprylic/capric/stearic triglycerides	Huls
Sollagen	Soluble collagen	Hormel
Soltrol 100	C9-11 Isoparaffin	Phillips
Solulan L-575	PEG-75 Lanolin, 50%	Amerchol
Solulan 5	Laneth-5 & Ceteth-5 & Oleth-5 & Steareth-5	Amerchol
Solulan 16	Laneth-16 & Ceteth-16 & Oleth-16 & Steareth-16	Amerchol
Solulan 25	Laneth-25 & Ceteth-25 & Oleth-25 & Steareth-25	Amerchol
Solulan 75	PEG 75 lanolin	Amerchol

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Solulan 98	Laneth-16 & Ceteth-16 & Oleth-16 & Steareth-16	Amerchol
Sorbitol Solution		Pfizer
Span 80	Sorbitan oleate	ICI
Spermwax	Cetyl esters	Robeco
Spherica P-1500	Silica	Ikeda
SS4267		
Standamul CTA	Hexyl laurate	Henkel
Standapol A	Ammonium lauryl sulfate	Henkel
Standapol ES-2 & ES-3	Sodium laureth sulfate	Henkel
Standapol SH-100	Disodium oleamide PEG-2 sulfosuccinate	Henkel
Standapol SL-60	Sodium lauryl ether sulfate	Henkel
Standapol T	TEA-lauryl sulfate	Henkel
Steol CA-460	Ammonium laureth sulfate	Stepan
Steol CS-130		Stepan
Steol CS-230		Stepan
Steol CS-330	Sodium laureth sulfate	Stepan
Steol CS-460		Stepan
Stepan-Mild LSB		Stepan
Stepan-Mild SL3		Stepan
Stepan TAB-2		Stepan

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Stepanol AM		Stepan
Stepanol AM-V	Ammonium lauryl sulfate	Stepan
Stepanol WA-Extra		Stepan
Stepanol WAC	Alkyl sulfate	Stepan
Stepanol WAT	TEA-lauryl sulfate	Stepan
Stepanquat 6585	Dipalmethyl hydroxyethylmonium methoxysulfate	Stepan
Ster-O-Pro	Oat flour	QO
Sulframin AOS Liquid	Sodium C-14 olefin sulfonate	Witco
Sunarome WMO	Octyl salicylate	Felton
Super Amide 128T	Lauramide DEA	Onyx
Super Anatol	Lanolin alcohol	Lanaetex
Super Hartolan	Lanolin alcohol	Croda
Supero1	Glycerin	Proctor&
Supersat	Hydrogenated lanolin	RITA
Supersat AWS4	PEG-20 hydrogenated lanolin	RITA
Supersat AWS24	PEG-24 hydrogenated lanolin	RITA
Supra	Talc	Cyprus
Supra A	Talc	Cyprus
Suspending Lacquer SLF-2		Mearl
Suttocide A	Sodium hydroxymethyl glycinate	Sutton
Syncrowax ERLC	C18-36 acid glycol ester	Croda
Syncrowax HR-C	Glyceryl tribehenate	Croda
Synthetic Candelilla	Candelilla wax	Ross

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Tagat L-2	PEG-20 glyceryl laurate	Goldschmidt
Tagat R-40	PEG-40 hydrogenated castor oil	Goldschmidt
Tagat S2	PEG-20 glyceryl stearate	Goldschmidt
Tagat T0	PEG-25 glyceryl trioleate	Goldschmidt
Talc 5251	Talc	
Talc Lake C37-5290	D&C Red #30	Sun
Tauranol WSP	Sodium methyl cocoyl taurate	Finetex
TEA 99%	Triethanolamine	Dow
Tegamine Oxide WS-35	Cocamidopropylamine oxide	Goldschmidt
Tegamine 18	Stearamidopropyl dimethylamine	Goldschmidt
Tegin & Tegin M	Glyceryl stearate SE	Goldschmidt
Teginacid H	Glyceryl stearate(and)Ceteth-20	Goldschmidt
Tego Betaine L-7	Cocamidopropyl betaine	Goldschmidt
Tego Betaine L-90	Lauramidopropyl betaine	Goldschmidt
Tego Betaine S	Cocamidopropyl betaine	Goldschmidt
Tego Care 150	Glyceryl stearate (and) steareth-25(and)ceteth-20 (and)stearyl alcohol	Goldschmidt
Tego Pearl B-48	Cocamidopropyl Betaine(and) Glycol Distearate(and) Cocamide MEA(and)Cocamide DEA	Goldschmidt
Tegosoft CI	Cetearyl isononoate	Goldschmidt
Tegosoft CO	Cetyl octanoate	Goldschmidt
Tegosoft CT	Caprylic/capric triglycerides	Goldschmidt
Tegosoft D0	Decyl oleate	Goldschmidt

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Tegosoft EE	Octyl octanoate	Goldschmidt
Tegosoft GC	PEG-7 glyceryl cocoate	Goldschmidt
Tegosoft Liquid	Cetearyl octanoate	Goldschmidt
Tegosoft M	Isopropyl myristate	Goldschmidt
Tegosoft OP	Octyl palmitate	Goldschmidt
Tegosoft OS	Octyl stearate	Goldschmidt
Tegosoft S	Isopropyl stearate	Goldschmidt
Tenox BHA	BHA	Eastman
Tenox BHT	BHT	Eastman
Tenox-6	Antioxidant	Eastman
Timica Extra Large Sparkle 110S, Timica Gold Sparkle 212P, Timica Golden Bronze 240A, Timica Silkwhite 110W, Timica Sparkle 110P.	Cosmetic pearl powders	Mearl
T-Maz 20	Polysorbate 20	PPG
T-Maz 60	POE 20 Sorbitan Monostearate	PPG
Tris Amino	Tris(hydroxymethyl)amino-methane	Angus
Triton N-101	Nonoxynol-10	Rohm&Haas
Trivent NP-13	Tridecyl neopentanoate	
Trivent OC-16	Cetyl octanoate	
Tween 20	Polysorbate 20	ICI
Tylose H20	Hydroxyethylcellulose	Hoechst

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Ucare Polymer JR-30M & SR-10	Polyquaternium-10	UnionCarbide
Ucon LB-1715	PPG-40 butyl ether	UnionCarbide
Uniderm HOMSAL	Homosalate	UniversalPres
Uvinul D50		BASF
Uvinul M-40	Benzophenone-3	BASF
Uvinul MS-40	Benzophenone-4	BASF
Varisoft CRC	Concentrate	Sherex
Veegum & Veegum HV & Veegum R	Magnesium aluminum silicate	Vanderbilt
Veragel Liquid, 1:10	Aloe vera gel	Dr. Madis
Versene Na2	Disodium EDTA	Dow
Viscasil 60M	Dimethicone	GE
Vitamin A Palmitate	Retinyl palmitate	Roche
Vitamin A Palmitate P1M0/BH	Corn oil (and) retinyl Palmitate	Roche
Vitamin A&D3 Blend (5:1Ratio)(Code63857)	Retinyl palmitate(and) cholcalciferol(and) corn oil	Roche
Vitamin B Complex CLR		CLRRichter
Vitamin E, USP-FCC (Code 60524)	Tocopherol	Roche
Vitamin E Acetate	Tocopherol acetate	Roche
Vitamin E Acetate, USP-FCC(Code 60526)	Tocopherol acetate	Roche



RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Vitamin E	Alpha tocopherol	Goldschmidt
Vitamin E Alcohol	Tocopherol	Roche
Vitamin E Linoleate	Tocopherol linoleate	
Vitamin E TPGS	Tocophersolan, 20% solution	
Volpo 10	Oleth-10	Croda
Volpo 20	Oleth-20	Croda
Wecobee M & S	Hydrogenated vegetable oil	Stepan
White Beeswax, NF		Ross
White Bleached Beeswax		Ross
White Ozokerite 77W	Ozokerite	Ross
White Perfecta Petrolatum		Witco
Wickenol 151	Isononyl isononoate	CasChem
Wickenol 155	Octyl palmitate	CasChem
Witcamide MAS	Stearamide MEA-Stearate	Witco
Witcodet AEG	Ammonium lauryl sulfate & etc.	Witco
Yellow Iron Oxide CV33-8073		Sun
Yellow Oxide 7055	Iron oxide	
Zinc Oxide USP		Whittaker,
Zonester 85	Tall Oil glycerides	Arizona
#1 Yellow Carnauba	Carnauba wax	Ross
62050 Red Iron Oxide		HK Color

# **Section XV**

## **Suppliers' Addresses**

Ajinomoto USA, Inc.  
Glenpoint Ctr, W  
500 Frank W. Burr Blvd.  
Teaneck, NJ 07645  
(201)-907-3244

Akzo Chemicals, Inc.  
300 S. Riverside Plaza  
Chicago, IL 60606  
(312)-906-7500/(800)-257-8292

Alcolac Inc.  
Rhone-Poulenc  
3440 Fairfield Rd.  
Baltimore, MD 21226  
(301)-355-2600/(800)-ALCOLAC

Allied-Signal, Inc.  
P.O. Box 2332R  
Morristown, NJ 07962  
(201)-455-2000/(800)-526-0717

Amerchol Corp.  
P.O. Box 4051  
136 Talmadge Rd.  
Edison, NJ 08818  
(908)-248-6000

Angus Chemical Co.  
1500 E. Lake Cook Rd.  
Buffalo Grove, IL 60089  
(708)-215-8600/(800)-323-6209

Amoco Chemical Co.  
200 E. Randolph Dr.  
Chicago, IL 60601  
(312)-856-3200/(800)-621-4567

Aqualon  
1313 N. Market St.  
Wilmington, DE 19899  
(302)-594-5000/(800)-345-8104

Arizona Chemical Co.  
1001 E. Business Hwy. 98  
Panama City, FL 32401  
(904)-785-6700/(800)-526-5294

Atochem North America  
900 Milk St.  
Cartaret, NJ 07008  
(908)-541-4414

BASF Corp.  
100 Cherry Hill Rd.  
Parsippany, NJ 07054  
(201)-316-3000/(800)-526-1072

Bernel Chemical Co., Inc.  
174 Grand Ave.  
Englewood, NJ 07631  
(201)-569-8934

Brooks Industries, Inc.  
70 Tyler Place  
South Plainfield, NJ 07080  
(908)-561-5200

Cabot Corp.  
Cab-O-Sil Div.  
Rte. 36W  
Tuscola, IL 61953  
(217)-253-3370/(800)-222-6745

Carborundum Co.  
168 Creekside Dr.  
Amherst, NY 14228  
(716)-691-2052

CasChem, Inc.  
40 Avenue A  
Bayonne, NJ 07002  
(201)-858-7900/(800)-CAS-CHEM

Centerchem, Inc.  
225 High Ridge Rd.  
Stamford, CT 06905  
(203)-975-9800

ChemMark Development  
70 Tyler Pl.  
South Plainfield, NJ 07080  
(908)-412-6192

Ciba-Geigy Corp.  
410 Swing Rd.  
Greensboro, NC 27419  
(919)-632-7327/(800)-221-0453

Croda, Inc.  
7 Century Dr.  
Parsippany, NJ 07054  
(201)-644-4900

Cyprus Industrial Minerals  
P.O. Box 3419  
Englewood, CO 80155  
(800)-325-0299

Degussa Corp.  
65 Challenger Rd.  
Ridgefield Park, NJ 07660  
(201)-641-6100

Dow Chemical USA  
2020 Dow Center  
Midland, MI 48674  
(800)-258-CHEM

Dow Corning Corp.  
Box 0994  
Midland, MI 48686  
(517)-496-4000

Dragoco, Inc.  
10 Gordon Drive  
Totowa, NJ 07512  
(201)-256-3850

Eastman Chemical Co.  
P.O. Box 431  
Kingsport, TN 37662  
(615)-229-4006/(800)-EASTMAN

EM Industries, Inc.  
5 Skyline Drive  
Hawthorne, NY 10532  
(914)-592-4660

Ethyl Corp.  
451 Florida St.  
Baton Rouge, LA 70801  
(504)-388-7040/(800)-535-3030

Felton Worldwide  
599 Johnson Ave.  
Brooklyn, NY 11237

Finetex, Inc.  
418 Falmouth Ave.  
Elmwood Park, NJ 07407  
(201)-797-4686

GAF Chemicals  
International Specialty Products  
1361 Alps Rd.  
Wayne, NJ 07470  
(201)-628-3000/(800)-848-7659

GE Silicones  
260 Hudson River Rd.  
Waterford, NY 12188  
(518)-237-3330/(800)-255-8886

Givaudan-Roure Corp.  
100 Delawanna Ave.  
Clifton, NJ 07015  
(201)-365-8000

Gloss Tex Industries, Inc.  
114 Iron Mountain Rd.  
Mine Hill, NJ 07081  
(201)-328-1010

Goldschmidt Chemical Corp.  
914 E. Randolph Rd.  
Hopewell, VA 23860  
(804)-541-8658/(800)-445-1809

B.F. Goodrich Co.  
9911 Brecksville Rd.  
Cleveland, OH 44141  
(216)-447-5000/(800)-331-1144

W.R. Grace & Co.  
55 Hayden Ave.  
Lexington, MA 02173  
(617)-861-6600/(800)-354-5414

Haarman & Reimer Corp.  
60 Diamond Rd.  
Springfield, NJ 07091  
(201)-912-5707/(800)-432-1559

Henkel Corp.  
11501 Northlake Dr.  
Cincinnati, OH 45299  
(513)-530-7300/(800)-543-7370

Heterene Chemical Co., Inc.  
295 Vreeland  
P.O. Box 247  
Paterson, NJ 07543  
(201)-278-2000

HK Color Group  
Warner-Jenkinson Co.  
3 Century Lane  
S. Plainfield, NJ 07080  
(219)-769-1122/(800)-543-HKCG

Hoechst Celanese Corp.  
3340 W. Norfolk Rd.  
Portsmouth, VA 23703  
(804)-483-7530/(800)-526-4960

Hormel  
P.O. Box 800  
Austin, MN 55912  
(507)-437-5676

Huls America, Inc.  
80 Centennial Dr.  
Piscataway, NJ 08854  
(908)-980-6946/(800)-526-0339

ICI Americas Inc.  
Concord Pike & New Murphy Rd.  
Wilmington, DE 19897  
(302)-575-3034/(800)-822-8215

Ikeda Corp.  
New Mexico Bldg. 3-1,  
Marunouchi 3-Chome,  
Chiyoda-Ku, Tokyo 100, Japan  
03-3212-8791

Inolex Chemical Co.  
Jackson & Swanson Sts.  
Philadelphia, PA 19148  
(215)-271-0800/(800)-521-9891

Kalama Chemical Inc.  
Suite 1110  
Bank of California Center  
Seattle, WA 98164  
(206)-682-7890

Karlshamms USA, Inc.  
501 W. First Ave.-P.O. Box 569  
Columbus, OH 43201  
(614)-299-3131

Kelco Div.  
Merck & Co., Inc.  
8355 Aero Dr.  
San Diego, CA 92123  
(619)-292-4900/(800)-535-2656

Koster Keunen, Inc.  
P.O. Box 447  
90 Bourne Blvd.  
Sayville, NY 11782  
(516)-589-0456

Lanaetex Products, Inc.  
151 3 Ave.  
Elizabeth, NJ 07206  
(908)-351-9700

Lipo Chemicals, Inc.  
207 19th Ave.  
Paterson, NJ 07504  
(201)-345-8600

Lonza, Inc.  
17-17 Rte. 208  
Fair Lawn, NJ 07410  
(201)-794-2400/(800)-777-1875

Dr. Madis Labs Inc.  
375 Huyler St.  
South Hackensack, NJ 07606  
(201)-440-5000

Meadowbrook Corp.  
30 Rockefeller Plaza  
New York, NY 10112  
(212)-582-0420

Mearl Corp.  
41 E. 42 St.  
New York, NY 10017  
(212)-573-8500

Merck & Co., Inc.  
P.O. Box 2000  
Rahway, NJ 07065

Miranol Inc.  
Rhône-Poulenc  
South Brunswick, NJ 08810  
(201)-329-3900/(800)-848-7659

Mona Industries, Inc.  
76 E. 24 St.  
P.O. Box 425  
Paterson, NJ 07544

National Starch & Chemical Co.  
10 Finderne Ave.  
Bridgewater, NJ 08807  
(908)-685-5000/(800)-532-1115

Nipa Laboratories, Inc.  
104 Hagley Bldg.  
Concord Plaza  
3411 Silverside Rd.  
Wilmington, DE 19810  
(302)-478-1522

NL Chemicals, Inc.  
P.O. Box 700  
Hightstown, NJ 08520  
(609)-443-2500

Novarome Inc.  
30 Stewart Pl.  
Fairfield, NJ 07004  
(201)-575-4550

Patco Polymer Additives Div.  
3947 Broadway  
Kansas City, MO 64111  
(816)-561-9050/(800)-821-2250

Penreco  
138 Petrolia St.  
Karns City, PA 16041  
(412)-283-5600/(800)-245-3952

Pentaparm Ltd./Centerchem Inc.  
225 High Ridge Rd.  
Stamford, CT 06905  
(203)-975-9800

Perry Industries  
1163 Glory Rd.-P.O. Box 19043  
Green Bay, WI 54307  
(414)-336-4343

Pfizer, Inc.  
235 E. 42nd St.  
New York, NY 10017  
(212)-573-2762/(800)-231-1590

PPG Industries  
3938 Porett Drive  
Gurnee, IL 60031  
(708)-244-3410/(800)-CHEM-PPG

Proctor & Gamble  
P.O. Box 599  
Cincinnati, OH 45201  
(513)-983-5607/(800)-543-1580

Protameen Chemicals, Inc.  
375 Minnisink Rd.  
Totowa, NJ 07511  
(201)-256-4374

QO Chemicals  
P.O. Box 2500  
West Lafayette, IN 47906  
(317)-497-6300/(800)-621-9521

Reheis, Inc.  
235 Snyder Ave.  
Berkeley Heights, NJ 07922  
(908)-464-1500

Rheox, Inc.  
P.O. Box 700  
Hightstown, NJ 08520  
(609)-443-2320

Rhône Poulenc Inc.  
Prospect Plains Rd.  
Cranbury, NJ 08512  
(609)-860-3025

Dr. K. Richter GmbH  
Chemisches Laboratorium  
Bennigonstrabe 25,  
D-1000 Berlin

RITA Corp.  
1725 Kilkenny  
Woodstock, IL 60098  
(815)-337-2500/(800)-426-7759

Robeco Inc.  
99 Park Ave.  
New York, NY 10016  
(212)-986-6410

Roche Chemical Division  
Hoffman-LaRoche, Inc.  
Nutley, NJ 07110  
(201)-235-8077/(800)-526-0189

Rohm & Haas Co.  
Independence Mall W  
Philadelphia, PA 19105  
(215)-592-3000

Frank B. Ross Co., Inc.  
P.O. Box 4085  
Jersey City, NJ 07304  
(201)-433-4512

Sandoz Chemicals Corp.  
4000 Monroe Rd.  
Charlotte, NC 28205  
(704)-331-7234/(800)-631-8077

Scher Chemicals Corp.  
Industrial W.  
Clifton, NJ 07012  
(201)-471-1300

Shaw Mudge & Co.  
P.O. Box 1375  
Stamford, CT 06904  
(203)-327-3132

Shell Chemical Co.  
P.O. Box 2463  
Houston, TX 77002  
(713)-241-6161

Sherex Chemical Co., Inc.  
5777 Frantz Rd.  
P.O. Box 646  
Dublin, OH 43017  
(614)-764-6500/(800)-366-6500

Stepan Co.  
22 W. Frontage Rd.  
Northfield, IL 60093  
(708)-446-7500

Strahl & Pitsch, Inc.  
230 Great E Neck Rd.  
W. Babylon, NY 11704  
(516)-587-9000

Sun Chemical Corp.  
411 Sun Ave.  
Cincinnati, OH 45232  
(513)-681-5950/(800)-343-2583

Sutton Laboratories, Inc.  
116 Summit Ave.  
Chatham, NJ 07928  
(201)-635-1551

Tioxide Specialties Ltd.  
Billingham, Cleveland TS23 1PS  
United Kingdom  
0642-370300

Toyomenka (America) Inc.  
Pacific Gateway Co.  
444 Market St.-10th Floor  
San Francisco, CA 94111  
(415)-788-4410

Tri-K Industries, Inc.  
P.O. Box 312  
27 Bland St.  
Emerson, NJ 07630  
(201)-261-2800/(800)-526-0372

Union Carbide Chemicals and  
Plastics Co., Inc.  
39 Old Ridgebury Rd.  
Danbury, CT 06817  
(203)-794-5300

Unichema North America  
4650 S. Racine Ave.  
Chicago, IL 60609  
(312)-376-9000/(800)-833-2864

R.T. Vanderbilt Co., Inc.  
30 Winfield St.  
P.O. Box 5150  
Norwalk, CT 06856  
(203)-853-1400

Van Dyk  
Main & William Sts.  
Belleville, NJ 07109  
(201)-450-3264

Vista Chemical Co.  
P.O. Box 19029  
900 Threadneedle  
Houston, TX 77224  
(713)-588-3000/(800)-231-3216

Wacker Silicones Corp.  
3301 Sutton Rd.  
Adrian, MI 49221  
(517)-264-8500/(800)-248-0063

Welch, Holme & Clark Co.  
7 Avenue L  
Newark, NJ 07105  
(201)-465-1200

Whittaker, Clark & Daniels, Inc.  
1000 Coolidge St.  
South Plainfield, NJ 07080  
(908)-561-6100

Witco Corp.  
520 Madison Ave.  
New York, NY 10022  
(212)-605-3600